Medical TIMES

THE JOURNAL OF GENERAL PRACTICE

Nasal Smears in Allergic States

Ectopic Pregnancy

Bleeding During Pregnancy

The Patient Teaches the Doctor

Smoking and The Doctor

Cortisone in Rheumatoid Arthritis

Editorials

Bellevue Postgraduate Clinico-Pathological Conferences

Contemporary Progress

Investing for the Successful Position

Modern Medicinals

Modern Therapeutics

Contents Pages 5a, 7a

VOL. 82 JUNE 1954 NO. 6

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Gantrisin is a sulfonamide so soluble that there is little danger of renal blocking and little or no need for alkalinization.

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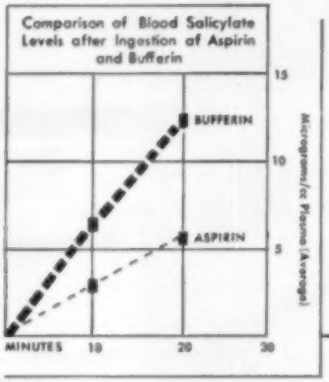
The antacids in Bufferin speed its pain-relieving ingredients through the stomach and into the blood stream. Actual chemical determinations show that within ten minutes after Bufferin is ingested blood salicylate levels are higher than those attained by aspirin in twice this time.[1]



2 DOES NOT UPSET THE STOMACH

Bufferin's antacid ingredients protect the stomach against aspirin irritation. This has been clinically demonstrated on hundreds of patients.

in usual doses

In a series of 238 cases, 22 had a history of gastric distress due to aspirin but only one reported any distress after taking 2 Bufferin tablets (equivalent to 10 grains of aspirin).[2]

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1. Effect of Buffering Agents on Absorption of Acetylsalicylic Acid. J. Am. Pharm. Assoc., Sc. Ed. 39:21, Jan. 1950
2. Gastric Tolerance for Aspirin and Buffered Aspirin. Ind. Med. 20:480, Oct. 1951

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Increased lipotropic demands for converting fat into energy may intensify liver damage already present in overweight patients.* The first comprehensive control for obesity, OBOLIP controls appetite *and* provides the lipotropics needed to correct liver dysfunction, expedite fat transport and promote metabolic burning.

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Each capsule contains:

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d-amphetamine sulfate	5 mg.
choline bitartrate	400 mg.
dl-methionine	150 mg.
vitamin B_{12} U.S.P.	4 mcg.
methyl cellulose	160 mg.

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*Zelman, S.: Arch. Int. Med. 90:141, 1952.

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MEDICAL BOOK NEWS

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Child Psychiatry Clinical Management of Behavior Disorders in Children, by Harry Bakwin, M.D. & Ruth Morris Bakwin, M.D. 438

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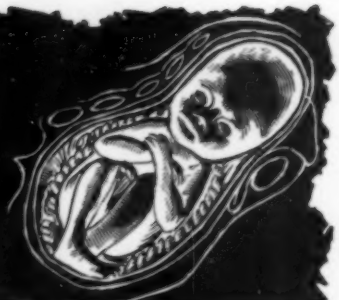
96% BIRTH RATE

with des or desPLEX



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des, the only micronized, triple crystallized (Grant Process) Stilbestrol (U.S.P.) Tablets—used in the treatment of pregnant women, with a history of one, two or more abortions—***averaged 96% normal live babies delivered***[1,2,3].

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Karnaky[4] and Javert[5] agree that C and B complex vitamins and Folic Acid are necessary for the normal physiological metabolism of estrogens. Jailer[6] further substantiates that a border-line deficiency of Folic Acid may result in premature separation of the placenta. *That is why desPLEX is the product of choice.*

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References:

1. Karnaky, K. J., Amer. J. Obst. & Gyn. 53:312, 1947. 2. Gitman, I. and Koplowitz, A., New York State J. Med. 50:2823, 1950. 3. Ross, J. S., N. Nat. M.A. 43:20, 1951. 4. Karnaky, Karl J., Surg., Gyn. & Obst. 91:617, 1950. 5. Javert, C. T., New York State J. Med. 48:2595, 1948. 6. Jailer, J. W., J. Clin. Endrocinol. 9:557, 1949.

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Incorporating the Long Island Medical Journal and Western Medical Times

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safe, smooth, gradual reduction of blood pressure

Raudixin is the most prescribed of rauwolfia preparations. It is *powdered whole root* of Rauwolfia serpentina—not just one alkaloid, but all of them. Most of the clinical experience with rauwolfia has been with Raudixin.

Raudixin lowers blood pressure in gradual, moderate stages. "A sense of well-being, decrease in irritability, 'improvement in personality' and relief of headache, fatigue and dyspnea" are frequently described by patients.[1]

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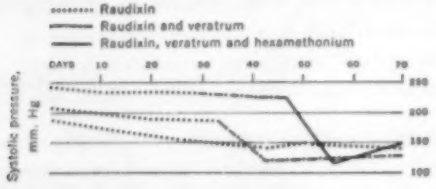
In mild or moderate cases it is usually effective alone; "...when rauwolfia is combined with other hypotensive agents, an additive hypotensive effect frequently is observed even in severe hypertension."[2] "It produces no serious side effects. It apparently does not cause tolerance."[1] 50 and 100 mg. tablets, bottles of 100 and 1000.

Raudixin alone and combined with other hypotensive agents



Raudixin Squibb rauwolfia

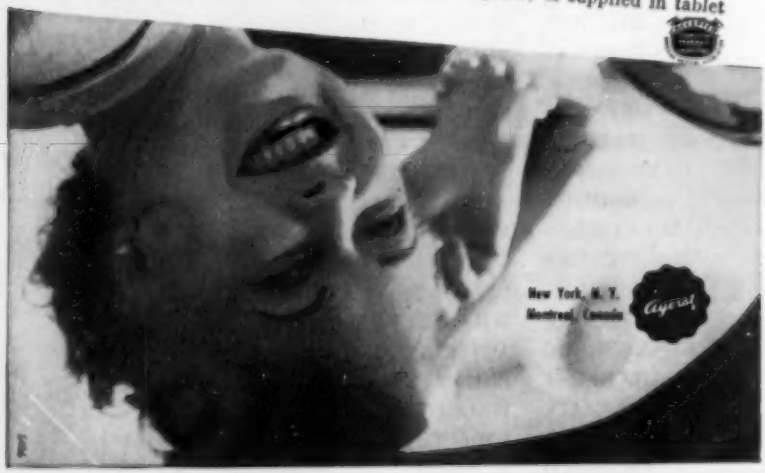
SQUIBB

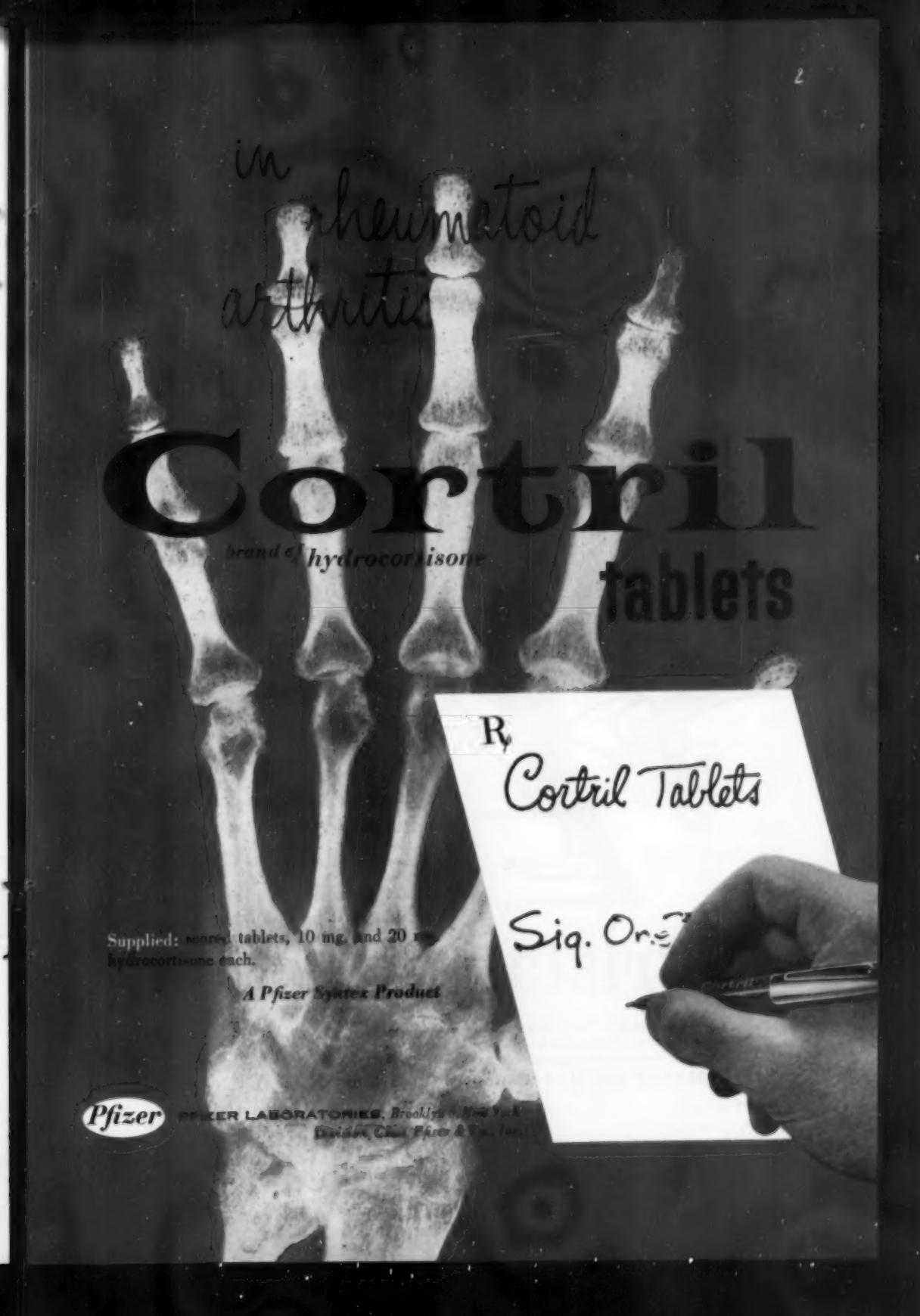
1. WILKINS, R. W., AND JUDSON, W. E.: NEW ENGLAND J. MED. 248:48, 1953.
2. FREIS, E. D.: M. CLIN. NORTH AMERICA 38:103, 1954.

"RAUDIXIN"® IS A TRADEMARK

BOARD OF ASSOCIATE EDITORS

For every patient who presents such obvious menopausal symptoms as **hot flushes,** there will be another with symptoms equally distressing but not so clearly defined; **arthralgia** as well as insomnia, headache, easy fatigability, are good examples. Frequently these symptoms are due to declining ovarian function but are not so recognized because they may occur long before, or even years after, menstruation ceases. In such cases, the patient should have the **benefit** of estrogen therapy. **"Premarin"** (complete natural equine estrogen-complex) not only produces prompt symptomatic relief but also imparts a gratifying and distinctive **"sense of well-being."** Has no odor . . . imparts no odor. "Premarin"® estrogenic substances (water-soluble), also known as conjugated estrogens (equine) is supplied in tablet and liquid form.

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tablets
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Supplied: scored tablets, 10 mg. and 20 mg. hydrocortisone each.
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contact dermatitis
pruritis ani, vulvae, scroti

first...

control the itch

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A new, versatile antihistaminic and antipruritic, it is supplied in a cosmetically delightful neutral base which fastidious patients will appreciate.

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*Bristamin brand of Phenyltoloxamine, an exclusive development of Bristol research, is an antihistaminic, antimycotic, and topical anesthetic with an exceptionally low order of toxicity.

SAMPLES AND LITERATURE ON REQUEST

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Off the Record . . .

True Stories From Our Readers

Each incident described has been contributed by one of our readers. Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported German apothecary jar will be sent in appreciation for each accepted contribution.

New Drug But Wrong Patient

A maiden lady of 78 came in one day recently with an article from a magazine on treatment of "frigidity" with estrogenic hormones.

She asked if I thought she could get some of it for treatment of her *cold feet.*

C. B., M.D.
Wallingford, Conn.

Father Time Unfair!

The anxious father was not much relieved to know that he had a three-pound daughter. In fact, he questioned the attending doctor: "My brother had only been married two months when he had a nine-pound boy. Now me and my wife have been married two years and we have a three pound girl. It ain't fair! How do you explain that, Doc?"

E. W., M.D.
Columbia, Tenn.

Casual Acquaintence

I came out into my waiting room one morning and saw an elderly couple talking with a few other patients. I asked, "Who is next?" and the elderly woman got up so I asked them both to come in.

I asked what the problem was and my lady spoke up and told me that she was having difficulty with a vaginal discharge.

I asked when she had gone through her change of life and she told me three years ago. I then told her that I would like to deviate for just a moment and ask her husband a question.

She looked at me rather startled and informed me that this gentleman was not her husband; that she had just met him this morning in the waiting room and that they were talking to while away the time!

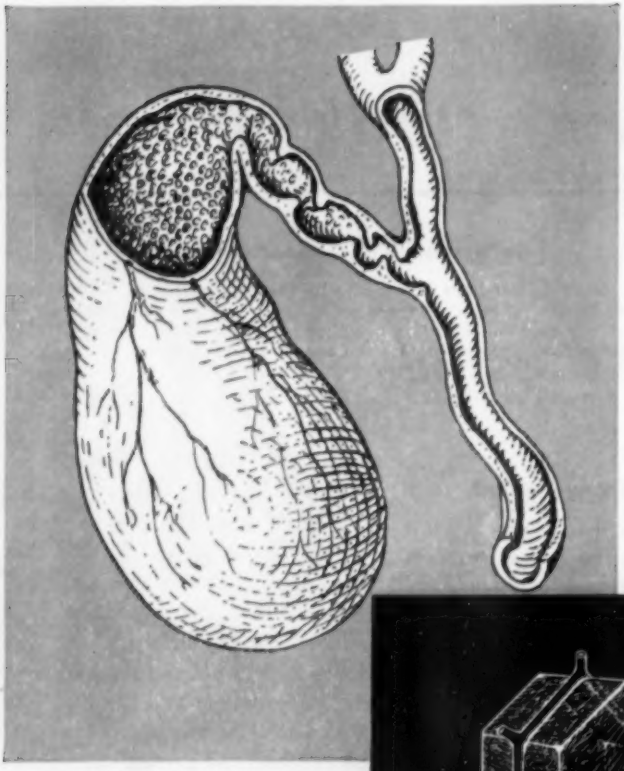
H. N., M.D.
Miami Beach, Fla.

Piece Work

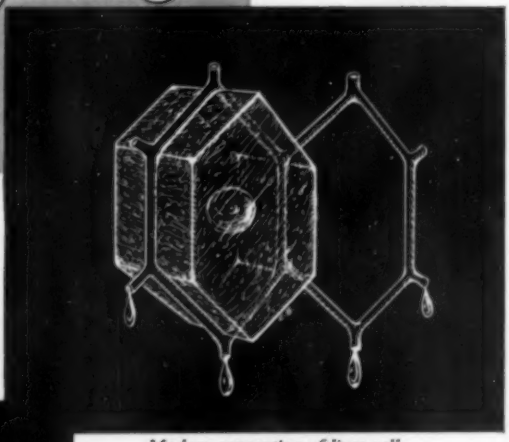
This happened a few days before Christmas. A doctor friend of mine had as an office patient, the five-year-old daughter of a contractor. When he asked her what she wanted for Christmas, she promptly replied, "I want a baby brother."

The father spoke up and said, "You should have put your order in sooner.

—Concluded on page 21a

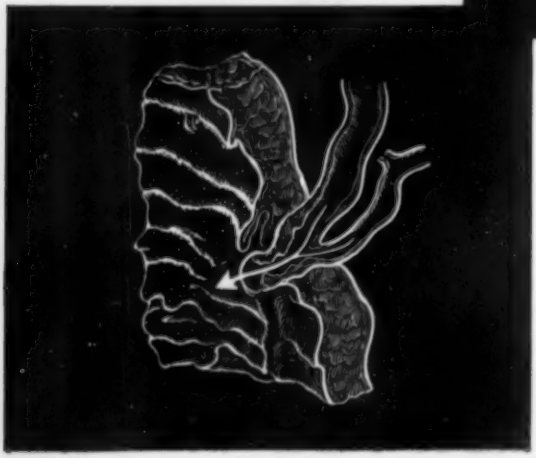


Gallbladder and ducts.



Modern conception of liver cell.

Ampulla of Vater and sphincter of Oddi.



By increasing bile secretion with Ketochol®
and controlling sphincter of Oddi spasticity with
Pavatrine®, a free flow of bile is instituted
with resultant symptomatic improvement.

Conservative, Effective Medical Management of Gallbladder Disease

The ketocholanic acids in Ketochol stimulate the flow of hepatic bile and flush the bile ducts. Antispasmodic medication, as provided in Pavatrine, diminishes gastrointestinal irritability and, by relaxing the sphincter of Oddi, effectively reduces symptoms of colic. This therapeutic program offers rational, conservative therapy in gallbladder dysfunction.

That the four bile acids present in Ketochol relieve biliary stasis is even more definitely proved by their use in the diagnosis of nonvisualized gallbladder. After the administration of Ketochol, repeat cholecystograms permitted[1] correct diagnoses.

In conjunction with the use of Ketochol for its hydrocholeretic action and Pavatrine for its antispasmodic effect, it is usually recommended that proper dietary restriction be enforced, milk and cream be employed as tolerated to encourage gallbladder emptying, and mental relaxation be provided. The combination Pavatrine with Phenobarbital is ideally suited for this latter purpose. This program of therapy serves a twofold aim: it provides corrective measures against the existing condition, and it counteracts the nervous "irritability" which is so frequently associated with gallbladder disease.

The average dose of Ketochol is one tablet three times daily with or following meals. The average dose of Pavatrine or Pavatrine with Phenobarbital is one or two tablets three or four times daily as needed. G. D. Searle & Co., Research in the Service of Medicine.

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1. Berg, A. M., and Hamilton, J. E.: A Method to Improve Roentgen Diagnosis of Biliary Diseases with Bile Acids, Surgery *32*:948 (Dec.) 1952.

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"unusually good results"[1]

"easy, safe, and free of side-reactions"[1]

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1. Susinno, A. M., and Verdon, R. E.: J.A.M.A. *154*:239 (Jan. 16) 1954.
2. Rottino, A.: Journal Lancet *71*:237, 1951.
3. Pelner, L., and Waldman, S.: New York State J. Med. *52*:1774 (July 15) 1952.

"pioneers in adenylic acid therapy" **Bischoff**

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—Concluded from page 17a

We won't have time now before Christmas."

She was silent a minute, then brightly said, "Daddy, can't you put more men on the job?"

W. B. M., M.D.
Washington, D. C.

Considerate Conversationalist!

The patient called at two o'clock in the morning and said he just wanted to catch me when I was not busy so he could talk with me!

R.R.K., M.D.
Jacksonville, Fla.

Better Late Than Never?

A fourteen year old girl, seven months pregnant, was forcefully brought into my office by her mother who finally took notice that she was pregnant.

On attempting to do a pelvic examination the child kept her legs clamped together. The mother being more outraged at her conduct in my office than her being pregnant shouted, "Open yo laigs gal and let the doctor zammon you; you done shet you laigs seven months too late."

L. G. L., M.D.
Lake City, Fla.

Shoe's On The Other Foot!

A 200-pound, overbearing husband brought his petite wife to my office after learning that I had sterilized the wife of one of his neighbors. In a loud and demanding voice he stated, "I want you to do something to stop my wife from having any more babies."

He was very pleased when I agreed to do so, and most happy to learn that this could be accomplished at once in my office and thus save hospital bills. I will never forget his expression when later the nurse asked him instead of his wife to step into the operating room.

You guessed it—He never submitted to this operation!

J. E. R., M.D.
Washington, D.C.

Paging Gray's Anatomy

While I was assisting in the emergency room during my fourth year of medical school, a young woman was brought in suffering from a stab wound.

The attending doctor asked her how it happened and she told him that she and her boyfriend had been assaulted by a "third party."

The doctor then inquired if her boyfriend had been stabbed in the fracas.

She replied, "Oh, no suh, Doctor; he was stabbed *between* the bellybutton and the fracas!"

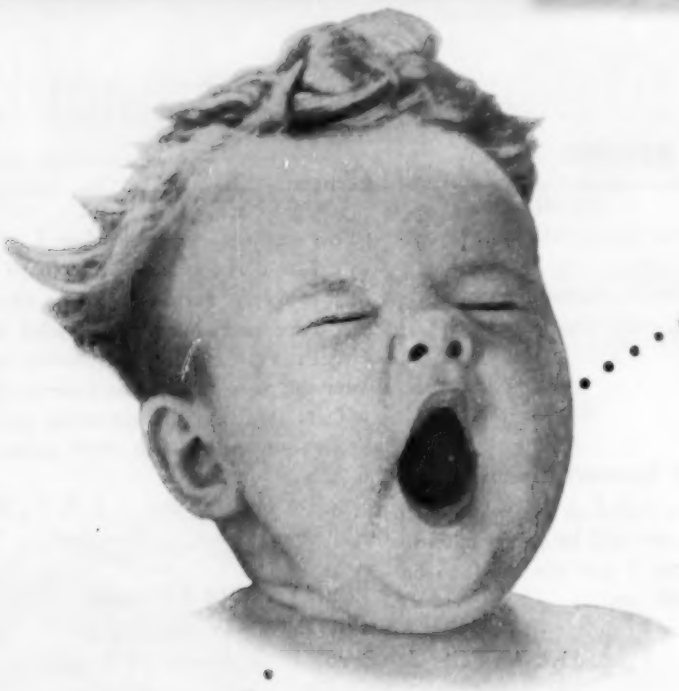
P. C., M.D.
New York, N. Y.

From the Mouths of Babes . . .

When I first began my practice, business was very slow. After one of my usual days, I was greeted at the door of my home by my six year old youngster's enthusiastic query, "Any suckers today, Dad?"

Of course, he meant *candy* suckers; but that wasn't what the neighbors thought!

J.C., M.D.
Wilmington, Del.



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In a pleasantly flavored syrup
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DOSAGE:
Under 1 yr. ..... 0.2-0.4 cc. (5-10 drops)
1 to 4 yrs. ..... 0.6 cc. (15 drops)
4 to 12 yrs. ..... 0.8 cc. (20 drops)
Over 12 yrs. ..... 1.2 cc. (30 drops)

FOR DAYTIME SEDATION:

TO AID IN INDUCING SLEEP:

ISSUED: 25 cc. bottles with calibrated dropper.

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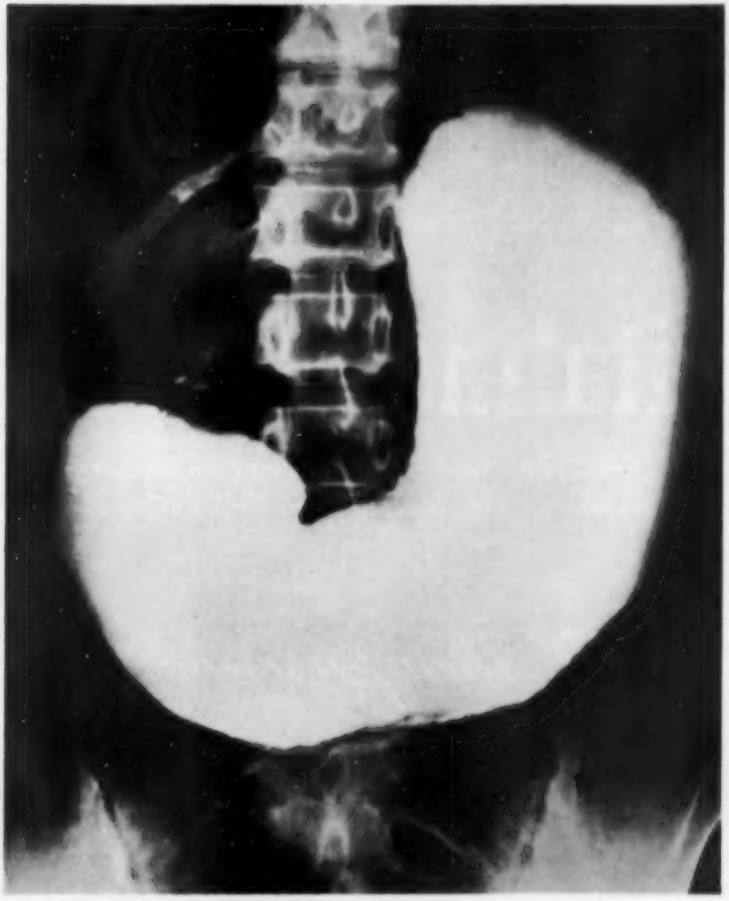
WHICH IS *YOUR* DIAGNOSIS?

1. Pyloric obstruction due to gastric carcinoma
2. Pylorospasm
3. Duodenal ulcer
4. Prepyloric ulcer
5. Gastrectasia

(ANSWER ON PAGE 86a)



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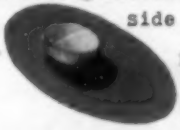

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brings pleasant relaxation of mind and body to the tense, anxious, nervous patient.

Seconesin Does More than ordinary sedatives .....it relaxes both mental and physical tensions to give a more comprehensive calming effect.

Seconesin is Safer—it contains the modern, safe relaxant mephenesin with safe, gentle secobarbital. Both work so well together that only minimal dosage is required for optimum effect—both act promptly and are eliminated promptly. There is no fear of "hangover." Patients do not feel sleepy or "logy" as with usual sedatives. They relax but stay mentally alert, able to pursue normal activities.

Euphoric Effect is Usually Marked—not the stimulated euphoria of amphetamine-like drugs but a relaxed feeling of well-being, of being comfortably and pleasantly at ease!

Seconesin is a handy product to keep in your bag, or in your office. *Why not send for a supply, with additional information, today.*

Composition of Seconesin: Lime-green, scored tablets each containing Mephenesin 400 mg. and Secobarbital 30 mg.

Dose: 1 tablet t.i.d., p.c.; 1 or 2 tablets on retiring if needed. Daytime sedation with **Seconesin** is usually so effective that most patients relax into refreshing sleep without nighttime dosage.

CROOKES LABORATORIES, INC. Crookes MINEOLA, NEW YORK

Therapeutic Preparations for the Medical Profession

Coroner's Corner

The Poorly-Chosen Bed

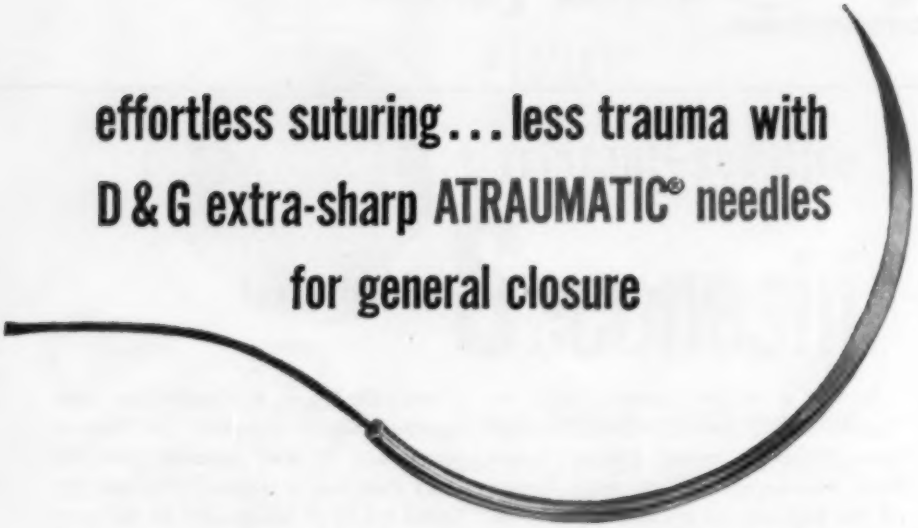
It was a bright, moonlit night in August, 1952. Two brothers, farmers from Nebraska, were driving home from Minneapolis. They were forced off the highway on a curve by another car, going at great speed. Their sedan overturned and came to rest on its left side in a grassy, wooded spot just off the road. The brothers were uninjured.

The driver climbed out of the door on the right side, and assisted his brother out after him. When they surveyed the damage, they were very surprised to find the legs of a man protruding from under their car! They were unable to lift the car, and in near panic they went to the highway to seek help. One car almost ran over them. Finally, a truck driver stopped—then others, and soon the car was righted. The man under the car was found to be dead.

As the coroner, I was called upon to conduct an investigation, which answered the obvious questions. It was apparent that the dead man was a vagrant who had prepared a bed of newspapers in the grass alongside the highway and had gone to sleep, face down. No fractures were found at autopsy. The victim had been simply smothered to death by the car that had by chance landed upon him.

A small bag, containing his meager belongings and three cents, was found by his side. No relatives could be located, so he was buried in potter's field, an unfortunate victim of a freak accident. H.M.J., M.D., Belleplaine, Minn.

effortless suturing... less trauma with D & G extra-sharp ATRAUMATIC® needles for general closure



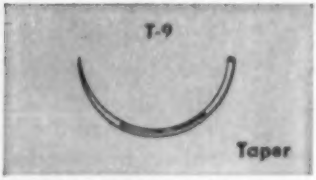
C-10, *three and one-half times enlarged*

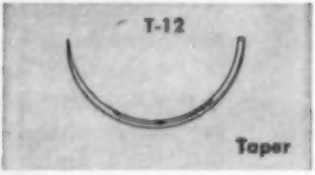
Did you know that these 9 temper-tested, hand-finished D & G Atraumatic needles are combined with a *variety* of suture materials? More and more surgeons use them for general closure and ob.-gyn. surgery because there is a fresh, sharp needle for each situation, no tug to clear the needle, less injury to tissues. Important, too—no threading, no dropped needles.

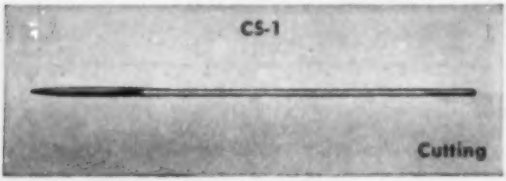
Study the needles illustrated here and ask your suture nurse for your selections. D & G Atraumatic needle-sutures simplify inventory and save nurses' time.

Atraumatic needles replace these eyed needles

Use ½ Circle Taper Point instead of: Mayo Catgut; Mayo Intestinal; Murphy Intestinal; Ferguson; Kelly. *Use ½ Circle Cutting or Trocar Point in place of:* Regular Surgeons; Fistula; Mayo Trocar; Martin's Uterine.







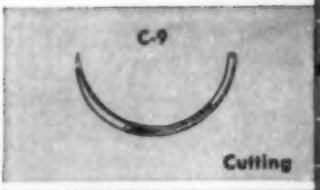
general closure sutures

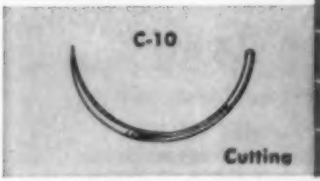
D & G "TIMED-ABSORPTION" SURGICAL GUT NON-BOILABLE:

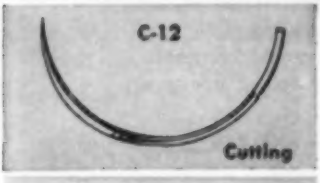
No.	Type	Length	Needle	Sizes
1509	A, Plain	27"	T-9	00 to 1
1546	C, Med. Chromic	27"	T-9	000 to 2
1508	A, Plain	27"	T-12	00 to 1
1548	C, Med. Chromic	27"	T-12	000 to 2
1561	C, Med. Chromic	27"	T-18	000 to 1
1563	C, Med. Chromic	27"	T-19	00 to 1
1547	C, Med. Chromic	27"	C-9	000 to 2
687	C, Med. Chromic	27"	C-10	000 to 2
689	D, Extra Chromic	27"	C-10	00
685	D, Extra Chromic	27"	C-12	0 to 2
693	C, Med. Chromic	27"	R-1	00 to 1
691	D, Extra Chromic	27"	R-1	00, 0

ANACAP® SILK:

No.	Material	Length	Needle	Sizes
1378	Black Braided Silk	30"	C-9	000 to 1
1379	Black Braided Silk	30"	T-9	000 to 1
1380	Black Braided Silk	30"	CS-1	000, 00, 0
1397	Black Braided Silk	30"	T-12	000 to 2





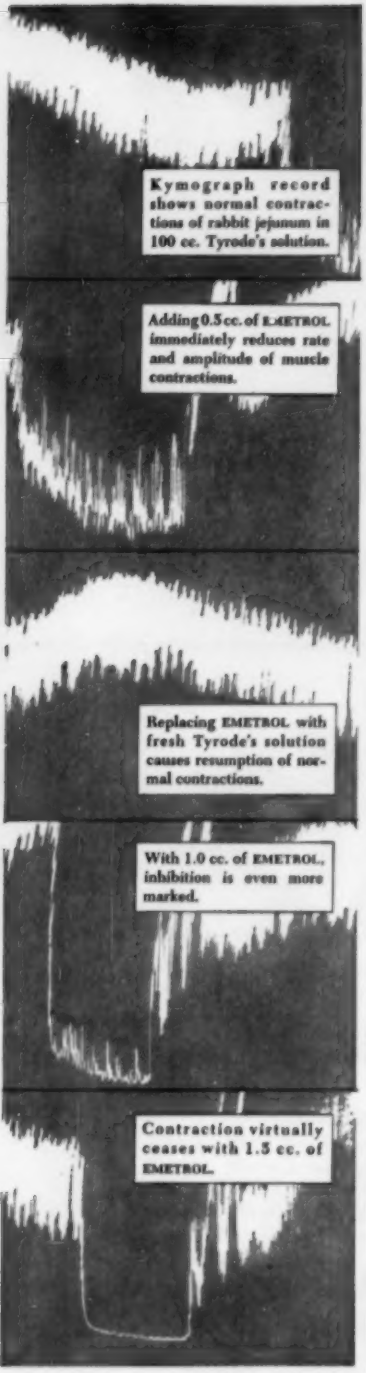


Need program material for staff meetings?
Request films from D & G Surgical Film Library.
Write for catalog.

Davis & Geck INC.

a unit of American Cyanamid Company

Danbury, Connecticut



this is why

EMETROL®

controls epidemic vomiting physiologically

EMETROL (Phosphorated Carbohydrate Solution) permits effective physiologic control of functional nausea and vomiting—without recourse to drugs.

Thus EMETROL can be given *safely*—by teaspoonfuls to children, tablespoonfuls to adults—every 15 minutes until vomiting ceases.

IMPORTANT: EMETROL is always given *undiluted*. No fluids of any kind should be taken *for at least 15 minutes after taking* EMETROL.

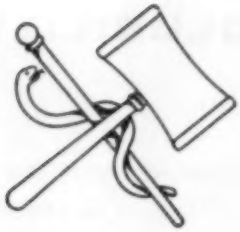
INDICATIONS: Nausea and vomiting resulting from functional disturbances, acute infectious gastroenteritis or intestinal "flu," pregnancy, motion sickness, and administration of drugs or anesthesia.

SUPPLIED: Bottles of 3 fl.oz. and 16 fl.oz., at all pharmacies.

SAMPLES AND LITERATURE TO PHYSICIANS ON REQUEST

Kinney

KINNEY & COMPANY
COLUMBUS, INDIANA



What's Your Verdict?

by Ann Picinich, Member of the Bar of New Jersey

A PHYSICIAN is sued by an infant, through its father, for injuries it allegedly sustained when it was taken from the womb of its mother through professional malpractice. The question arises as to whether such infant has a right of action for prenatal injuries.

Physician's counsel contends that an unborn child has no juridical existence, but is so intimately united with its mother as to be a part of her. Any injury to it, which is not too remote to be recovered for at all, is recoverable by the mother.

Counsel for the infant maintains that at the time of the injury this infant was a viable infant, capable of living apart from its mother, and in fact now living. A viable child, he argues, is a separate, distinct and individual person, and the right of that person's possession of life, limbs and body is to be protected by the courts.

How would you decide, Doctor?

THIS COURT SAID: At common law no action for prenatal injury existed on the theory that the child was a part of its mother. That a viable child is a "part" of its mother seems to be a contradiction in terms. True, it is in the womb of its mother, but it is now capable of extra-uterine life, and while dependent for its continued development on sustenance derived from its peculiar relationship to its mother, it is not a "part" of the mother in the sense of a constituent element. There are many instances of living children being taken from dead mothers. The court held, therefore, that it is but natural justice that a child, if born alive and viable, be allowed to maintain an action in the courts for injuries wrongfully committed upon its person while in its mother's womb.

Based on a decision of the District Court of the United States for the District of Columbia.

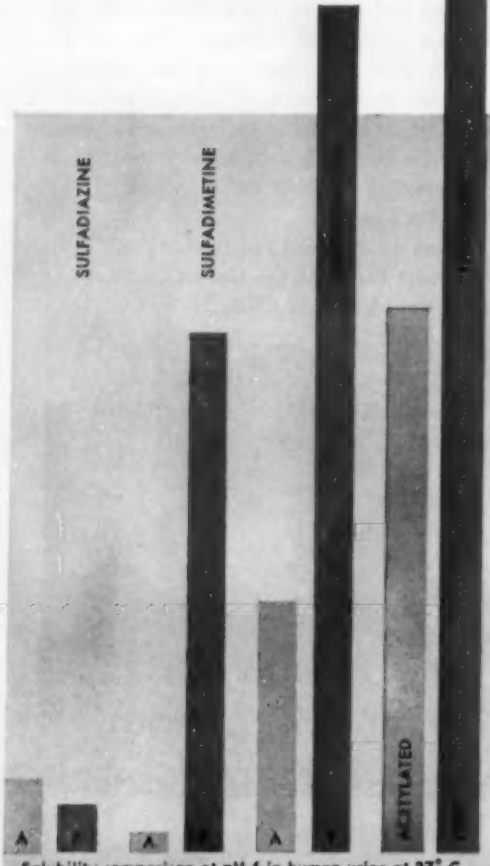
SUITABILITY *depends upon* SOLUBILITY

Laboratory studies have demonstrated the greater solubility of "Thiosulfil" as compared with the other three leading sulfonamides prescribed in urinary tract infections.
This obvious advantage, added to high bacteriostatic activity and a low acetylation rate makes

"THIOSULFIL"

the safest and most effective sulfonamide yet presented for

urinary tract infections



Solubility comparison at pH 6 in human urine at 37° C.

- Rapid transport to site of infection for early and effectiye urinary concentration
- Rapid renal clearance
- Minimum toxicity
- Minimum risk of sensitization
- No alkalinization required
- No forcing of fluids

"THIOSULFIL"®

Brand of sulfamethylthiadiazole

SUSPENSION
No. 914 —
0.25 Gm. per 5 cc.
Bottles of 4 and
16 fluidounces

TABLETS
No. 785 —
0.25 Gm. per tablet
Bottles of 100
and 1,000

New York, N. Y. • Montreal, Canada

Ayerst

5403

NEW VASODILATOR

To: Medical Profession

From: Hoffmann-La Roche Inc.

Preliminary clinical trials of ILIDAR®, an entirely new drug for the relief of vasospasm, have been completed.

Ilidar tablets are particularly useful for the relief of vasospasm, especially when the patient complains of painful, numb, cold extremities.

Ilidar is quadrergic; its vasodilating effects are the result of four distinct pharmacologic actions -- sympatholysis, adrenolysis, epinephrine reversal, and direct vasodilation.

ILIDAR
for vasospasm

ILIDAR
for vasospasm

A New Era in Medicine

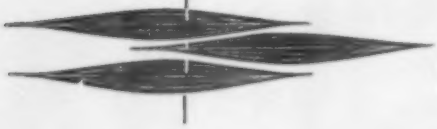
CLINICAL ENZYMOLOGY

Parenzyme

Intramuscular trypsin, 5 mg./cc.

NATIONAL

For rapid, dramatic reduction
of acute, local inflammation
regardless of etiology



KOAGAMIN®

SYSTEMIC AID TO FASTER CLOTTING

KOAGAMIN acts rapidly—in minutes, not hours—because it acts directly on the blood-clotting mechanism, unlike vitamin K (indicated only in relatively infrequent prothrombin deficiencies).

In daily practice—KOAGAMIN is an invaluable aid in arresting capillary or venous bleeding of surgical, traumatic or internal origin. Used preoperatively, it assures a clearer field and less postoperative oozing. Especially useful in:

postpartum hemorrhage • uterine bleeding • prostatectomy • tonsillectomy
epistaxis • oral and nasal surgery • gastric ulcer.

Safe—no untoward side effect—including thrombosis—has ever been reported with KOAGAMIN.

KOAGAMIN, an aqueous solution of oxalic and malonic acids for parenteral use, is supplied in 10-cc. diaphragm-stoppered vials.

Chatham

CHATHAM PHARMACEUTICALS, INC.
NEWARK 2, NEW JERSEY, U.S.A.

LETTERS TO THE EDITOR

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers, who are invited to comment on controversial subjects, names will be omitted when requested.

Tumors of the Lip

Dear Editor:

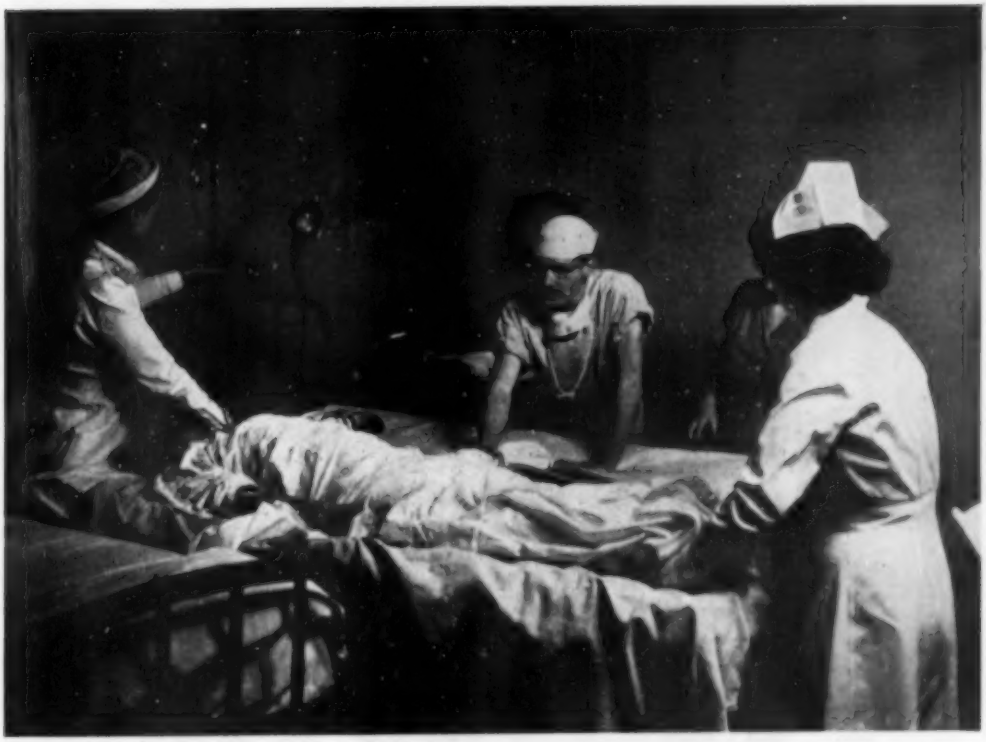
You kindly sent the January issue of MEDICAL TIMES. There is an article on office treatment of tumors of the lip. On the Stanford University Service at the San Francisco Hospital, the surgical and radiological staff recommend roentgen therapy as the primary treatment for stage I or stage II carcinoma of the lip, reserving surgery only for the very advanced lesions. We saw no reference to radiotherapy in your article.

L. Henry Garland, M.D.
San Francisco, Calif.

Dear Doctor:

Thank you for your recent letter. A discussion of roentgen therapy of carcinoma of the lip was intentionally omitted from the article to which you refer ("Office Surgery" MEDICAL TIMES, January 1954). The "Office Surgery" articles are written primarily for the

—Continued on page 44a



when his need is greatest... **postoperatively**

Severe or rapid depletion of water-soluble vitamins is effectively and optimally countered by ASF—Anti-Stress Formula. Fulfilling the recommendations of the Committee on Therapeutic Nutrition, National Research Council, ASF supplies the critical vitamin needs of the patient during periods of physiological stress.

Each ASF Capsule contains:

Thiamine Mononitrate	10 mg.
Riboflavin	10 mg.
Niacinamide	100 mg.
Pyridoxine Hydrochloride	2 mg.
Calcium Pantothenate	20 mg.
Ascorbic Acid	300 mg.
Vitamin B_{12} Activity	4 mcg.
Folic Acid	1.5 mg.
Menadione (vitamin K analog)	2 mg.

Dosage: 2 capsules daily in severe pathologic conditions; 1 capsule daily when convalescence is established.

Supplied: bottles of 30 and 100.

*Trademark

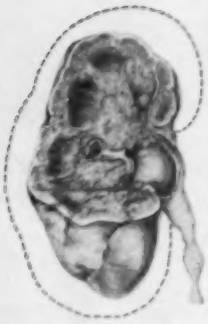
stress

New ASF* *(Anti-Stress Formula)*

BASIC PHARMACEUTICALS FOR NEEDS BASIC TO MEDICINE

536 Lake Shore Drive, Chicago 11, Illinois

ROERIG Rx



RAPID CURES

of urinary tract infections

prevent permanent kidney damage

Infections of the lower urinary tract rarely remain localized for any length of time. The kidneys are often invaded rapidly unless effective treatment is instituted immediately. Hence, the choice of the first drug used may decide the fate of the kidneys.

FURADANTIN®

brand of nitrofurantoin, Eaton

Furadantin is unique, a new chemotherapeutic molecule, neither a sulfonamide nor an antibiotic.

RAPID ACTION. Within 30 minutes after the first Furadantin tablet is taken, the invaders are exposed to antibacterial urinary levels.

WIDE ANTIBACTERIAL RANGE. Furadantin is strikingly effective against a wide range of clinically important gram-negative and gram-positive bacteria, including strains notorious for high resistance.

Scored tablets of 50 mg. Bottles of 50 and 250.

Scored tablets of 100 mg. Bottles of 25 and 250.

Also available: Furadantin Pediatric Suspension, containing 5 mg. of Furadantin per cc. Bottle of 4 fl. oz.

EATON LABORATORIES
NORWICH, NEW YORK

THE NITROFURANS—A UNIQUE CLASS OF ANTIMICROBIALS U.S. PRODUCTS OF EATON RESEARCH

LETTERS TO THE EDITOR

—Continued from page 40a

general practitioner, and an attempt is made to present the most widely accepted method of treatment.

Tumors under 1.5 cm. in diameter and 4 mm. in depth can be safely treated by roentgen therapy. However, the depth of the lesion cannot be accurately estimated by biopsy. Also, these small lesions lend themselves very well to excisional therapy, with no resultant disfigurement. The dangers of radiation, both early and late, are avoided by excisional therapy. It is for these reasons that the majority of clinics throughout the country prefer excision.

The value of roentgen therapy for some lip lesions in old patients is widely recognized, as is combined surgical and roentgen therapy of some advanced lesions. However, such lesions are beyond the scope of "Office Surgery."

B. Herold Griffith, M.D.
Surgery Consultant

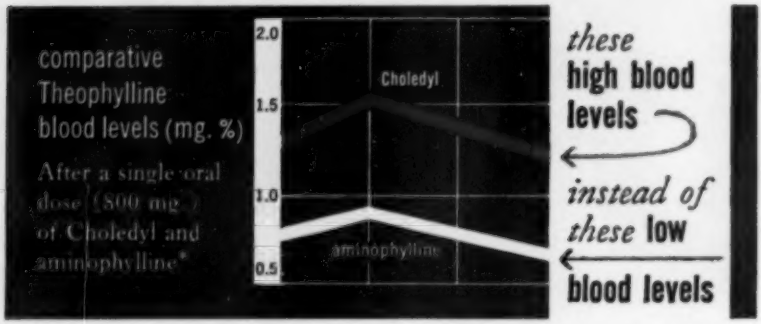
Dear Editor:

Dr. Griffith states that the "Office Surgery" articles are written primarily . . . to present the most widely accepted method of treatment. Why not write them to present the *best* method of treatment?

His statement that tumors under 1.5 cm. in diameter and 4 mm. in depth can be treated safely by roentgen therapy is correct; the implication that

—Concluded on page 82a

When you see an indication for
ORAL AMINOPHYLLINE THERAPY
you can now attain



**The therapeutic effect of aminophylline is due solely to its theophylline content*

℞ CHOLEDYL®

(Choline theophyllinate, NEPERA)

Up to 76% higher theophylline blood levels (see graph above) are obtained with oral Choledyl® than with oral aminophylline.

Choledyl is the *new* xanthine derivative—five times more soluble than aminophylline, and far better absorbed. Choledyl not only provides higher blood levels, but minimizes the common gastrointestinal irritations associated with ordinary aminophylline.

Oral Choledyl is designed for continuous, intensive theophylline medication free from the drawbacks of poorly soluble, irritating aminophylline, orally; or the scattered emergency use of aminophylline, intravenously. Choledyl is well tolerated on long administration. Unlike aminophylline, Choledyl showed no loss of efficacy even during prolonged treatment.

DOSE: *Adults*—initiate with 200 mg. q.i.d. Adjust dosage to individual requirements. *Children over six*—100 mg. t.i.d. or q.i.d.
SUPPLIED: 100 mg. and 200 mg. tablets, bottles of 100 and 500.

NEPERA CHEMICAL CO., INC.
Pharmaceutical Manufacturers
Nepera Park, Yonkers 2, N. Y.

here's why your patient gets

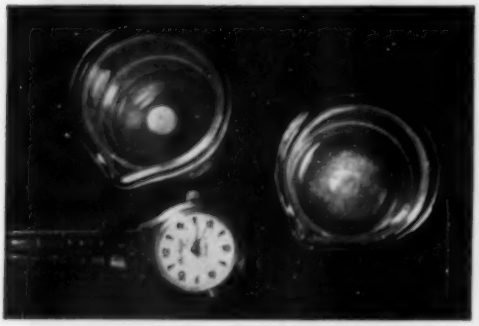
3:15—Disintegration Test begins in actual stomach fluids (pH 2.7). Beaker at left contains ordinary enteric-coated erythromycin. At right is new *Film Sealed* ERYTHROCIN Stearate (Erythromycin Stearate, Abbott).

Earlier Blood Levels *from*

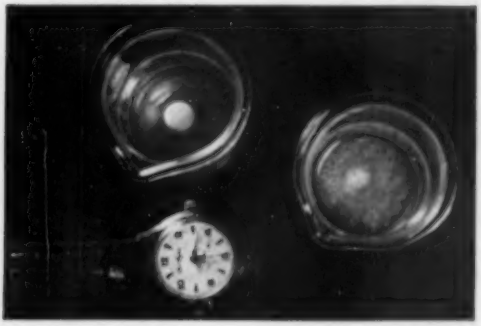
FILM SEALED* ERYTHROCIN

TRADE MARK

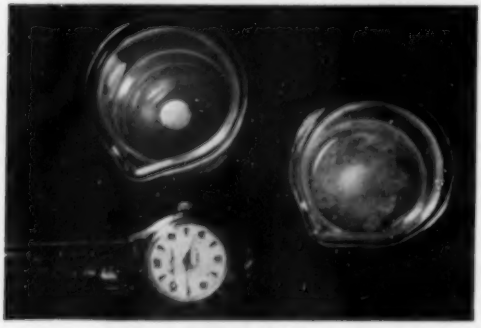
- DISINTEGRATES FASTER THAN ENTERIC COATING
- HIGH BLOOD CONCENTRATIONS WITHIN 2 HOURS



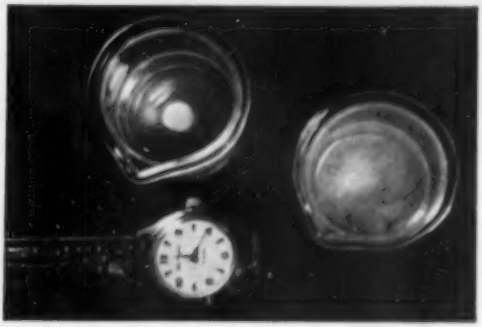
3:20—Five minutes later, *Film Sealed* coating has already started to disintegrate. The tissue-thin film actually begins to dissolve within 30 seconds after your patient swallows tablet.



3:30—*Film Sealing* is now completely dissolved. At this stage, ERYTHROCIN is ready to be absorbed, and ready to destroy sensitive cocci—even those resistant to most other antibiotics.



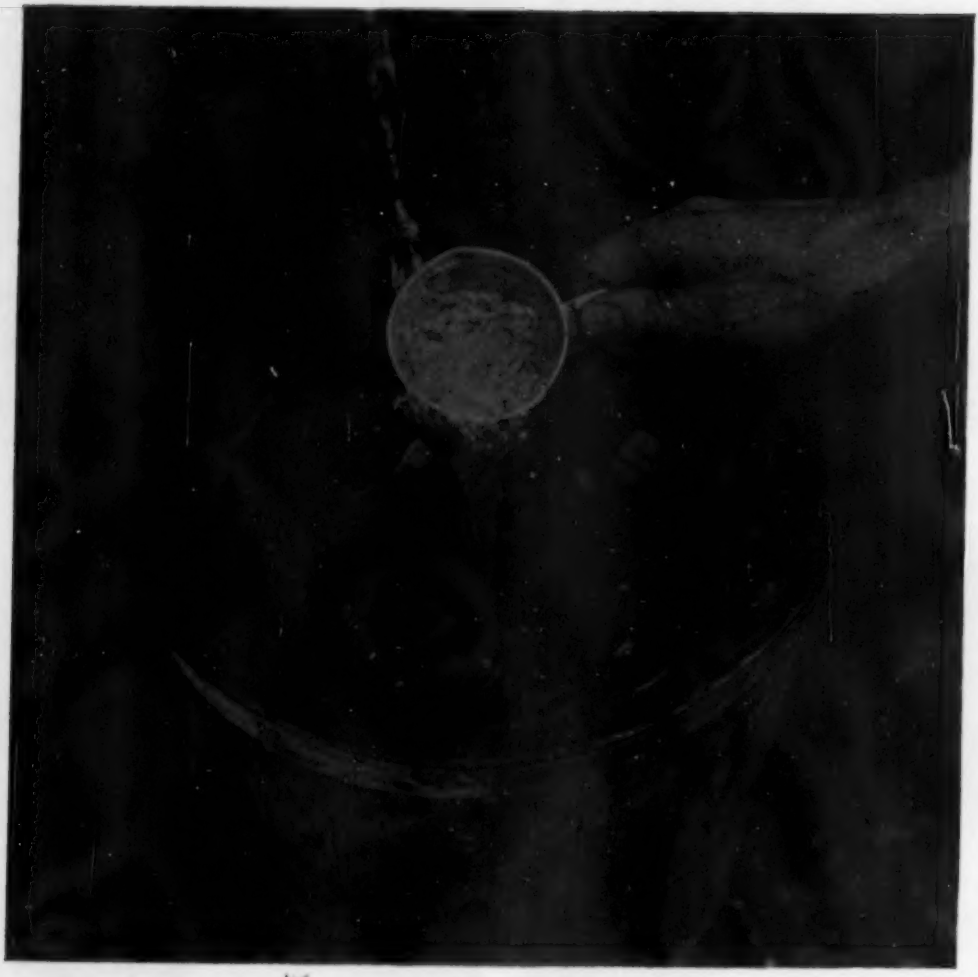
3:45—Now the *Film Sealed* tablet mushrooms out with all of the drug available for absorption. Note that enteric-coated tablet is still intact. Tests show that the new Stearate form definitely protects ERYTHROCIN against gastric acids.



4:00—Because of *Film Sealing* (marketed only by Abbott) the drug is released faster, absorbed sooner. In the body, effective ERYTHROCIN blood levels now appear *in less than 2 hours* (instead of 4-6 hours as before). Abbott

*pat. applied for

406100



Picturesque

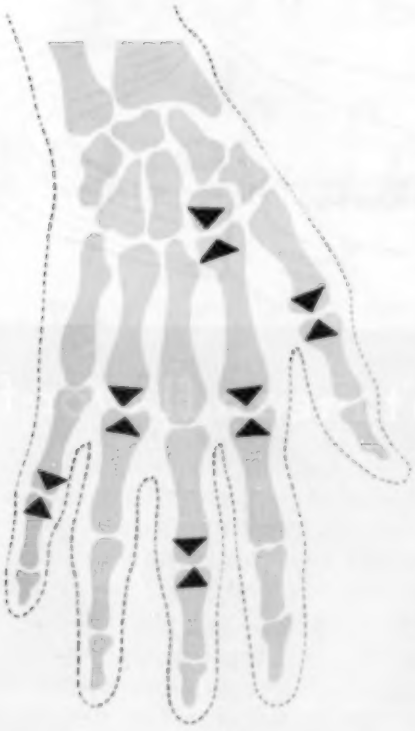
Yes, but it could be a reservoir of diarrheal infection. Against the common diarrheas, STREPTOMAGMA brings potent antibacterial action *plus* adsorbent, demulcent and protective effects. Clinical experience with STREPTOMAGMA indicates that remission is nearly always prompt and complete.

STREPTOMAGMA®

Dihydrostreptomycin Sulfate and Pectin with Kaolin in Alumina Gel

Bottles of 3 fl. oz.

Wyeth®
Philadelphia 2, Pa.



in
arthritis
and allied
disorders

Rapid Relief of Pain
usually within a few days

Greater Freedom
and Ease of Movement
functional improvement in a significant percentage of cases

No Development of Tolerance
even when administered over a prolonged period

BUTAZOLIDIN

(brand of phenylbutazone)

Its usefulness and efficacy substantiated by numerous published reports, BUTAZOLIDIN has received the Seal of Acceptance of the Council on Pharmacy and Chemistry of the American Medical Association for use in:

- **Gouty Arthritis**
- **Rheumatoid Arthritis**
- **Psoriatic Arthritis**
- **Rheumatoid Spondylitis**
- **Painful Shoulder (including peritendinitis, capsulitis, bursitis and acute arthritis)**

Since BUTAZOLIDIN is a potent agent, patients for therapy should be selected with care; dosage should be judiciously controlled; and the patient should be regularly observed so that treatment may be discontinued at the first sign of toxic reaction.

Descriptive literature available on request.

BUTAZOLIDIN® (brand of phenylbutazone), coated tablets of 100 mg.

Geigy

GEIGY PHARMACEUTICALS
Division of Geigy Chemical Corporation
220 Church Street, New York 13, N.Y.
In Canada: Geigy Pharmaceuticals, Montreal

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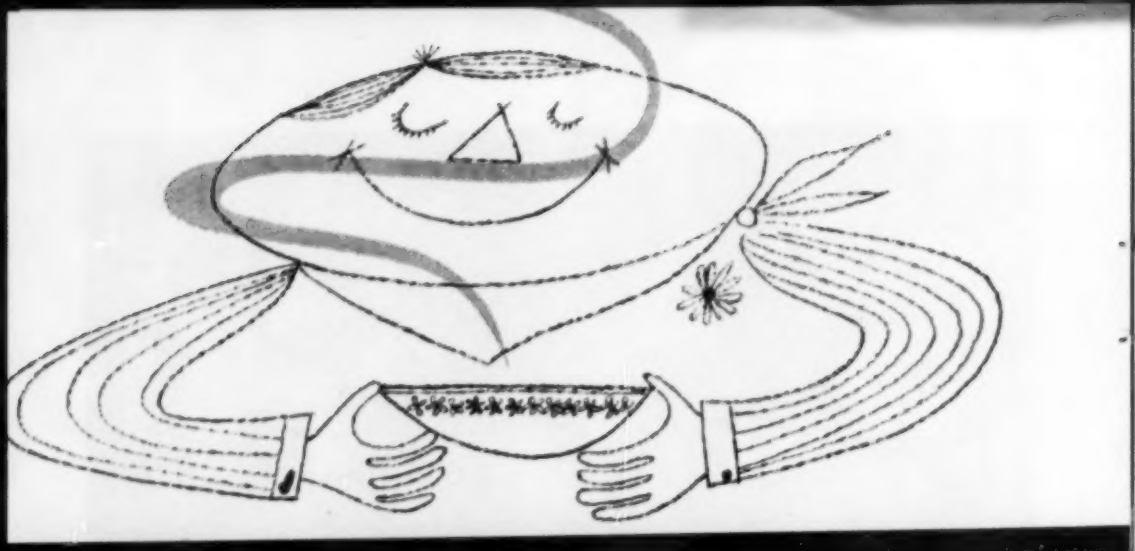

salt-free needn't mean flavor-free

DIASAL is enthusiastically endorsed by low-salt dieters for the zest and flavor it gives to pallid, sodium-restricted meals. So closely does it match the appearance, texture and taste of table salt that patient adherence to your diet instructions is virtually assured.

DIASAL contains only potassium chloride, glutamic acid and inert ingredients . . . no sodium, lithium, or ammonium. It may be used safely for extended periods, both at the table and in cooking. Because of its potassium, DIASAL may be a valuable prophylactic against potassium depletion.

DIASAL®

packaging: available in 2-ounce shakers and 8-ounce bottles.
Send for liberal supplies of tasting samples and low-sodium diet sheets for your patients.

FOUGERA

E. FOUGERA & COMPANY, INC.
75 Varick Street, New York 13, N. Y.

provides relief from a wide variety of seasonal allergies

BENADRYL Hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a variety of forms—including Kapseals,® 50 mg. each; Capsules, 25 mg. each; Elixir, 10 mg. per teaspoonful; and Steri-Vials,® 10 mg. per cc. for parenteral therapy.

BENADRYL®

Patients troubled by lacrimation, nasal discharge, and sneezing respond to BENADRYL and enjoy symptom-free days and restful nights.

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WHEN A CATHARTIC MADE NEWS

THE COURSE of medicine has been marked by significant advances since those early years of the century when William Osler was asked what drug he would select for use on a desert island, if he could have but one. He named Epsom salt because, he reasoned, it could be applied externally in various conditions, and used internally as a cathartic.

Like his advocacy of euthanasia after middle age, Osler's choice, even in that era of calomel and other drastic purges, was not received with universal approval, though it may have been justified under the conditions imposed.

Indeed, *if* secondary constipation did not usually follow the initial cathartic action of magnesium sulfate, its value in constipation would be less subject to doubt. If this and other saline cathartics did not interfere, even for days after their ingestion, with the action of other medication, as established by Macht and Finesilver,[1] their administration, aside from exceptional circumstances, would not be contraindicated.

The use of phenolphthalein is not restricted by such drawbacks. On the contrary, by excretion in the bile after the first action, gentle stimulation of peristalsis continues in gradually decreasing measure for two or three days.[2,3] This aperient action[4] maintains the tone of the colon and prevents immediate recurrence of bowel inactivity. In the treatment of chronic intestinal stasis, this sustained action permits reduction of the frequency of medication. And phenolphthalein may be used in conjunction with other medication, including the sulfonamides and antibiotics. Phenolphthalein exerts no influence on the normal intestinal flora, nor does it enhance or in any way interfere with the action of other drugs in the intestinal tract.

Phenolphthalein is the laxative ingredient of Ex-Lax. It is biologically standardized for this purpose, to maintain unvarying efficacy. By incorporating this laxative in a chocolated base, the other advantages of phenolphthalein are supplemented by unusual palatability. Ex-Lax is particularly suitable for use when pleasant taste requires special consideration, as during pregnancy and in administration to children. By an exclusive process, the laxative ingredient is uniformly distributed in Ex-Lax, assuring that fractional parts of a tablet always yield a proportionate dose.

The use of Ex-Lax by an ever increasing number of physicians in their practice is an expression of confidence in its therapeutic merits. For palatability, exactingly controlled physiological efficiency, convenience in use and freedom from side effects, Ex-Lax has established a record of excellence.

A trial supply of Ex-Lax, along with a physician's pocket notebook, bound in leather, and making medical reference information readily available, gladly sent to physicians.

Ex-Lax, Inc., Brooklyn 17, New York

1. D. I. Macht and E. M. Finesilver: Bull. Johns Hopkins Hosp. 33:330, 1922.
2. T. Sollmann: A Manual of Pharmacology. W. B. Saunders Co., 1948; page 177.
3. J. C. Krantz, Jr. and C. J. Carr: The Pharmacologic Principles of Medical Practice. Williams and Wilkins Co., 1951; page 377.
4. A. Grollman: Pharmacology and Therapeutics. Lea & Febiger, 1954; page 391-392.

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Crystoserpine

Reserpine, Dorsey

All the Valuable Hypotensive and Sedative Properties of Rauwolfia Serpentina

Crystoserpine—chemically pure crystalline reserpine obtained from Rauwolfia serpentina—exerts the valuable hypotensive, sedative, and bradycrotic actions characteristic of this important hypotensive agent. Yet it possesses the distinctive advantages of chemically pure substances: uniform potency and freedom from inert impurities and less active alkaloids.

IN MILD, MODERATE, AND LABILE HYPERTENSION

Crystoserpine usually suffices as the sole therapeutic agent in the less severe forms of essential hypertension. It is especially effective when emotional agitation is a factor. Blood pressure is adequately reduced and subjective relief is impressive.

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When clinical trial for 60 days demonstrates that a more profound hypotensive response is required, the desirable action of Crystoserpine constitutes a good base on which to add the influence of a second, more potent drug. Crystoserpine decreases the dosage needs of the latter and reduces the incidence of reactions to it—a synergistic relationship.

SIMPLE DOSAGE PLAN

The initial dose is 3 to 4 tablets (0.75 to 1.0 mg.) daily for 30 days, then 1 to 2 tablets (0.25 to 0.5 mg.) daily. Hypotension is a rare exception and there are no known contraindications. Crystoserpine is supplied in 0.25 mg. scored tablets.

MODERN MEDICINALS

These brief resumes of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards and a record kept. This file can be kept by the physician for ready reference.

C. V. P., U.S. Vitamin Corp., New York 17, N. Y. Citrus flavonoid compound with Vitamin C. To improve capillary resistance by helping to overcome abnormal capillary permeability and fragility, thus acting to prevent bleeding and vascular accidents in hypertension, retinal hemorrhage, diabetes, certain types of uterine and gastric bleeding, purpura, TB bleeding, etc. Helps to prevent capillary damage in x-ray therapy. **Dose:** 6 capsules daily in divided doses. **Sup:** In bottles of 100 and 1,000 capsules.

Erythrocin Lactodionate, Abbott Laboratories, North Chicago, Illinois. A new soluble erythromycin salt — suitable for intravenous or intramuscular administration. For patients who cannot take oral medication or in whom immediate high blood levels are important. **Dose:** Recommended is 1 to 2 Mgm. per pound of body weight, I.V. or I.M. Use water or dextrose 5% solution to make solution. Do not use Saline Solution. **Sup:** 10 cc. vial sterile powder (equivalent to 300 Mg. of Erythrocin base).

Fasigyn, Pfizer Laboratories, Brooklyn, N. Y. A combination of 2.5 mg. estradiol benzoate, U. S. P., and 12.5 mg. progesterone, U. S. P., in one cc. of sesame oil. For habitual abortion and functional secondary amenorrhea. **Dose:** For intra-muscular use only. **Sup.** In 10 cc. multiple dose vials and one cc. Steraject cartridges.

Kerodex, Ayerst Laboratories, New York 16, N. Y. A highly effective barrier cream providing an invisible yet strong and elastic protective coating. Formulated to give optimum protection against housewives' eczema, "dishpan hands," diaper rash, poison ivy and various other contact dermatoses. **Dose:** As determined by physician. **Sup:** 2 types, Kerodex No. 71 (water-repellent) and Kerodex No. 51 (water-miscible). Each come in 4 oz. tubes and 1 lb. containers.

Lutrexin Tablets, Hynson, Westcott & Dunning, Inc., Baltimore 1, Md. Brand name for the protein-like uterine relaxing factor—possibly a new ovarian hormone. In dysmenorrhea, may be useful in threatened and habitual abortions. **Dose:** As determined by physician. **Sup:** In bottles of 25 tablets (1,000 units ea.).

Maxilets, Abbott Laboratories, North Chicago, Illinois. Each S. C. Green tablet contains vitamin A 10,000 U.S.P. units, vitamin D 1,000 U.S.P. units, thiamine monoitrate 5 mg., riboflavin 5 mg., nicotinamind 25 mg., pyridoxine hydrochloride 2 mg., ascorbic acid 100 mg., vitamin B_{12}

—Concluded on page 60a

invitation to asthma?

not necessarily . . .

Tedral, taken at the first sign of attack, often forestalls severe symptoms.

relief in minutes . . . Tedral brings symptomatic relief in a matter of minutes. Breathing becomes easier as Tedral relaxes smooth muscle, reduces tissue edema, provides mild sedation.

for 4 full hours . . . Tedral maintains more normal respiration for a sustained period—not just a momentary pause in the attack.

Prompt and prolonged relief with Tedral can be initiated any time, day or night, whenever needed, without fear of incapacitating side effects.

Tedral provides:

theophylline	2 gr.
ephedrine	⅜ gr.
phenobarbital	⅛ gr.

in boxes of 24, 120 and 1000 tablets

Tedral®

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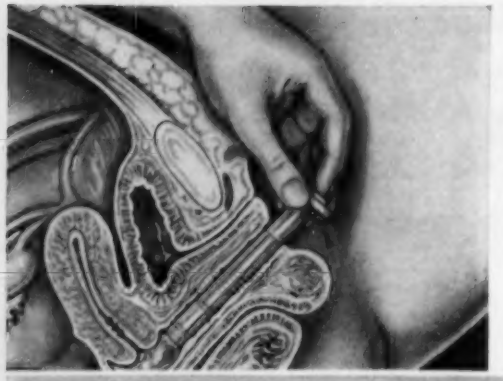
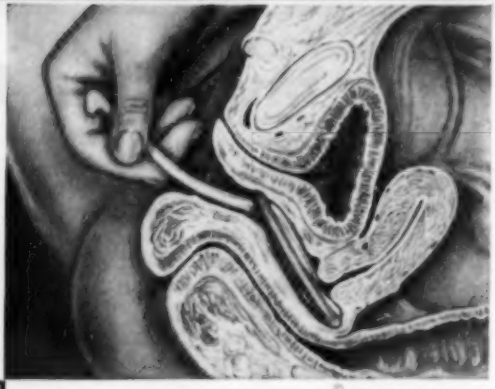
The success or failure of conception control in any given case is of immeasurable importance to the patient concerned and the physician whose advice has been sought.

Only the physician is qualified to select the technic best adapted to the needs of the patient.



WHEN in the judgment of the physician, jelly alone is sufficiently protective, RAMSES® Vaginal Jelly* is a contraceptive of choice because (1) it occludes the os uteri for at least 10 hours after coitus, and (2) it immobilizes the spermatozoa in the fastest time recognized by the official Brown and Gamble technic.

WHEN in the judgment of the physician, the diaphragm-jelly technic is required the RAMSES TUK-A-WAY® Kit provides all the essentials for maximum occlusive and immobilizing action. Each kit contains a RAMSES Flexible Cushioned Diaphragm of prescribed size, a RAMSES Diaphragm Introducer, and a regular size (3-oz.) tube of RAMSES Vaginal Jelly.



gynecological division

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quality first since 1883

*Active agent, dodecaethyleneglycol monolaurate 5%, in a base of long-lasting barrier effectiveness.

diabetes

"the ideal detection center is the office of the family physician"[1]

Found: 20,255 "new" diabetics in one year in the private practice of 5000 physicians responding to a nationwide poll.* Of these, 81% were detected by urine-sugar analysis; 62% of the physicians used *Clinitest.*

Only 19% of the diabetics in this survey were detected by findings other than glycosuria. "Every patient therefore, should have at least one urinalysis as part of his examination, even if the purpose of his visit is only the removal of wax from the ears."[2]

CLINITEST®

BRAND

for detection of urine-sugar

*Data from nationwide poll: Diabetes in daily practice

70% were over 40.
40% had a family history of diabetes.
65% were overweight.

1. Blotner, H., and Marble, A.: New England J. Med. *245*:567 (Oct. 11) 1951.
2. Steine, L.: GP *8*:45 (July) 1953.

Ames Diagnostics
Adjuncts in clinical management

AMES
COMPANY, INC. • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto

53184

—Concluded from page 56a

2 mcg., folic acid 0.1 mg., pantothenic acid 5 mg., plus 9 important minerals and trace elements. Vanilla flavored sugar coating. For vitamin mineral deficiencies. **Dose:** As determined by physician. **Sup:** In bottles of 100.

Monodral, Winthrop-Stearns, Inc., New York 18, N. Y. An anticholinergic agent acts by blocking acetylcholine stimulation at the synapses in automatic ganglia and at the endings of certain parasympathetic nerves, and possesses few atropine-line reaction. For peptic ulcer (gastric and duodenal), hyperacidity, gastritis, pylorspasm, etc. **Dose:** As determined by physician. **Sup:** In bottles of 100 caplets.

Mysoline, Ayerst Laboratories, New York 16, N. Y. A new anticonvulsant found particularly valuable in the control of grand mal and psychomotor seizures. **Dose:** As determined by physician. **Sup:** In 0.25 Gm. tablets, bottles of 100 and 1,000.

Nidar, Armour Laboratories, Chicago, Illinois. Rational combination of short-acting, intermediate-acting, and long-acting barbiturates formulated especially to control tension peaks in the average patient. For individual control of tension peaks. **Dose:** As determined by physician. **Sup:** Bottles of 100, shipping cartons of 12.

Petrone, Kremers-Urban Co., Milwaukee, Wisc. Each cc. contains progesterone, 25 mg.; testosterone, 25 mg.; estrone, 6 mg. Functional uterine bleeding; menopause. **Dose:** As determined by physician. **Sup:** In 10 cc. vial.

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dermatologic
principle

topical anticholinergic for skin disorders...

PRANTAL CREAM 2%

50 Gm. tube

for local control of pruritus, sweating

**rapid relief in contact dermatitis,
atopic eczema, dyshidrotic eczema,
neurodermatitis, hyperhidrosis,
and poison ivy dermatitis**

PRANTAL® Methylsulfate
(brand of diphenmethanil
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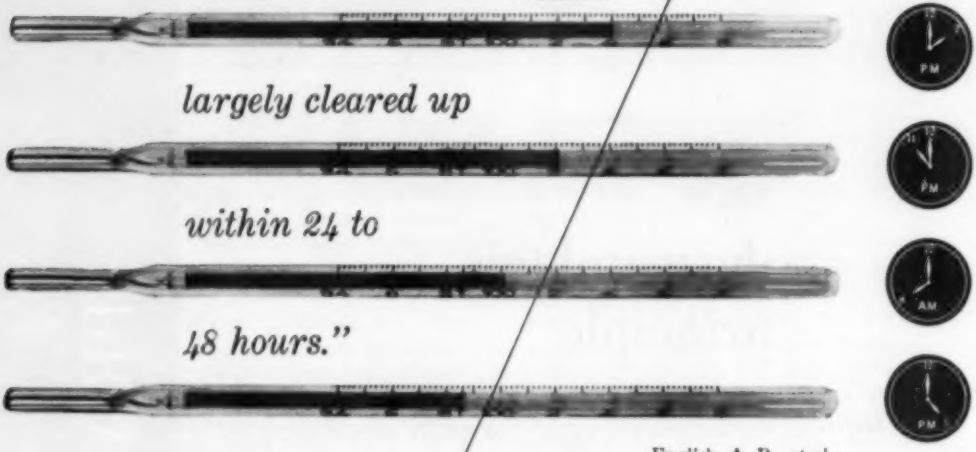
PRANTAL CREAM 2%

"Symptoms, including fever,



largely cleared up within 24 to 48 hours."

English, A. R., et al.:
Antibiotics Annual (1953-1954),
New York, Medical
Encyclopedia, Inc., 1953, p. 70.

AIH

afebrile in hours c

Tetracyn

Brand of tetracycline hydrochloride

a new broad-spectrum antibiotic of unexcelled tolerance

Simple, dramatic proof of the effectiveness of Tetracyn is offered by the characteristic rapid defervescence noted in the treatment of a wide range of susceptible infectious diseases. *Think of Tetracyn* whenever you take a temperature for an AIH response in Tetracyn-sensitive infections.

Supplied: TETRACYN TABLETS *(sugar coated)*
250 mg., 100 mg. and 50 mg.

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TETRACYN INTRAVENOUS
Vials of 250 mg. and 500 mg.

TETRACYN OINTMENT *(topical)*
30 mg./gram ointment
½ oz. and 1 oz. tubes

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536 Lake Shore Drive, Chicago 11, Illinois

MORE THAN 10 LOAVES OF BREAD

... would be required to equal the 100 mg. nicotinamide content of a single capsule of "BEMINAL" FORTE with VITAMIN C, which also supplies therapeutic amounts of other essential B factors and ascorbic acid as follows:

Thiamine mononitrate (B_1) ..... 25.0 mg.
equivalent to more than 400 eggs

Riboflavin (B_2) ..... 12.5 mg.
equivalent to at least 8 slices of liver

Nicotinamide ..... 100.0 mg.
equivalent to more than 10 loaves of bread

Pyridoxine HCl (B_6) ..... 1.0 mg.
equivalent to about 14 servings of spinach

Calc. pantothenate ..... 10.0 mg.
equivalent to almost 4 quarts of milk

Vitamin C (ascorbic acid) ..... 100.0 mg.
equivalent to more than 15 apples

"BEMINAL"® FORTE with VITAMIN C

Ayerst

Recommended whenever high B and C levels are required and particularly pre- and postoperatively. Suggested dosage: 1 to 3 capsules daily, or more as required.
No. 817—supplied in bottles of 100 and 1,000

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The Outstanding Advantage of VISO-CARDIETTE Ownership . . .

You can depend DIRECTLY on Sanborn Co. for

PERFORMANCE

QUALITY

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Write for descriptive literature

Sanborn sells and ships *directly* to the user—whether doctor, hospital, clinic or laboratory. There are no intermediate steps, no "middle men" with diversified interests.

When a doctor considers electrocardiograph ownership, Sanborn is glad to ship a Viso-Cardiette *directly to him* for a 15 day, *no-obligation* trial. If it is not satisfactory, he ships it back in the same carton. On the other hand, if he keeps it, he thus continues a *direct-to-user* relationship which reaps many extra benefits.

First of all, he knows he has paid the same price for his Viso as any other doctor, due to the Sanborn "direct" policy.

As an owner, he begins to receive from Sanborn Company the "Technical Bulletin", a bi-monthly publication prepared by those who *know the most* about the Viso.

He knows that his service man is a *SANBORN* man (probably located right in his own city).

He sees in the instrument the high quality and performance standards that stem from a *first-hand* knowledge of heart testing needs.

And, the Viso owner likes the feeling that he is dealing directly with people who have been *specializing* for 30 years in the design, manufacture and servicing of electrocardiographs, and who assume *direct responsibility* for their instruments.

SANBORN COMPANY

195 Massachusetts Avenue, Cambridge 39, Massachusetts

in the treatment of Hypertension

Effectively

mannitol hexanitrate exerts vasodilator action and persistent relaxation of smooth muscle

New and Nonofficial Remedies: A.M.A. Council on Pharmacy and Chemistry, J. B. Lippincott, p. 243, 1953.

Safely

fewer side effects with mannitol hexanitrate . . . greater percentage fall in blood pressure

N. Y. Physician *31*:20 (Jan.) 1949.

Economically

combined medication that provides simultaneously:

vasodilatation (mannitol hexanitrate)
diuresis (theophylline)
sedation (phenobarbital)
capillary protection (ascorbic acid + rutin)

Semhyten®

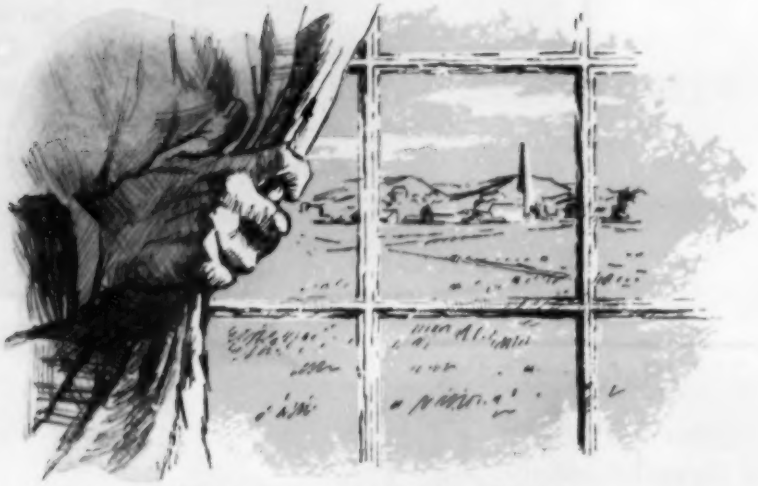
BRINGS THE PRESSURE DOWN SLOWLY  **SAFELY**

Complete Medication for the Hypertensive

Each Semhyten Capsule contains:		Phenobarbital	¼ gr. (15 mg.)
Mannitol Hexanitrate	½ gr. (30 mg.)	Rutin	10 mg.
Theophylline	1½ gr. (0.1 Gm.)	Ascorbic Acid	15 mg.

Supplied: In bottles of 100, 500 and 1000 pink-top capsules.

The S. E. MASSENGILL Company • Bristol, Tennessee



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smaller dosage
Just 2.5 to 10 mg. is usual effective daily oral dose.

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Stimulates within 20 to 60 minutes when taken orally.

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10 mg., orally, may last an average of 6 to 12 hours.

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DESOXYN'S *small dose rarely causes unwanted effects.*

IN 20 to 60 minutes you'll see the transformation. Your patient becomes brighter, more energetic, more cooperative. DESOXYN brings these benefits *faster*, over *longer duration*, and with *smaller dosage* than other sympathomimetic amines. This is because, weight for weight, DESOXYN is more potent than related drugs. You gain the desired stimulation with fewer side effects, too.

Next time prescribe DESOXYN, to relieve depression during convalescence, menopause, old age, or in psychogenic cases. Abbott

DESOXYN® hydrochloride

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2.5 and 5 mg. tablets, elixir, and 1 cc. ampoules

406128

Nasal Smears

Their Importance in the Diagnosis of Allergic States*

JAMES A. MANSMANN, B.S., M.D., F.A.C.A.**
Pittsburgh, Pennsylvania

There are ten million major allergic patients in the United States. The etiological diagnosis of some is easy to make, while others need extensive histories, physical examinations and laboratory tests for proper evaluation. Because of the great number of this type of patient a physician doing general medicine must be equipped to recognize them.

In order to study and treat these allergic patients a physician must be familiar with the criteria for an allergic diagnosis:

1. A positive family history of allergy
2. Multiple allergic symptoms, past or present, noted by the patient
3. Eosinophilia of the tissues or exudates
4. Specific positive allergy skin tests
5. Symptomatic response to anti-allergic drugs.

The preliminary examination in our office to determine the presence of an allergic etiology consists of the following:

1. Complete allergy history
2. Physical examination
3. Differential blood count
4. Nasal smear
5. Vital capacity testing if there are any symptoms referable to the lower respiratory tract.

If these studies are suggestive of allergy, then intradermal allergy tests are ordered. It is only the rare cases in which skin tests are done at the first visit.

If one wishes to do a good study nothing can take the place of a thorough allergy history. It forms one of the most useful parts of an allergic investigation and in experienced hands will frequently supply clues and leads of prime importance in the solution of not only the allergic factor but also what the allergen or allergens might be. It necessitates a thorough knowledge of allergy, intimate study of the patient and his habits.

This report consists of our observations on nasal smears as they relate to the diagnosis of the allergic state.

* From the Allergy Clinic of the Saint Francis Hospital with the Technical Assistance of Miss Doris Johnson and Miss Marie Fitz.

** Assistant Professor of Medicine, University of Pittsburgh School of Medicine and Director of the Department of Allergy, St. Francis Hospital, Pittsburgh, Pennsylvania.

Our studies extend back over fifteen years and comprise the evaluation of more than ten thousand smears of the nasal secretion. The value of nasal smear studies was well established years ago by many investigators and was recently re-emphasized by Hansel.

Based upon the information obtained, we believe that a cytologic examination of nasal secretion ranks second to a careful history and should precede other diagnostic procedures, such as skin tests, et cetera. A nasal examination may be misleading and inconclusive if it is not preceded by a thorough intelligent history with reference to allergy, and followed by proper study of the nasal secretion. Of course patients with respiratory symptoms usually have nasal secretions, but many allergic individuals whose complaints are primarily related to the intestinal tract, skin, et cetera also show reaction in the nose and secretion may be obtained. Many observers in widely separated areas have recorded the fallacy of relying upon local nasal examination alone. In the Pittsburgh area, smog, smoke and irritating chemical particles may cause a very red nasal mucous membrane in allergic patients.

The following three case reports are presented to emphasize the value of nasal smear studies in differentiating allergy from infection in children:

Case 1: D. M., aged eleven, reported to the Nose and Throat Clinic in September 1940, on account of enlarged tonsils and for consideration of tonsillectomy. The history of allergy was recognized and an allergic survey and control were instituted. The nasal smear showed many eosinophiles and they were also increased in the blood. She is much improved now. The tonsillectomy was never performed. It should not be done with the idea of controlling allergic symptoms.

Case 2: W. H., aged four, reported to the Hospital Clinic with a history of "always being in the hospital" because of "severe colds" and convulsions. After an allergic survey, including a nasal smear which revealed no eosinophiles but many organisms, bacterial vaccine was given with excellent results. This boy has been followed for four years, during which time he has had three slight respiratory infections. Recently the first convulsion, since bacterial immunization was started, was noted during an attack of scarlet fever. On the basis of these observations bacterial vaccines should not be administered before the allergic state is known and the presence of many organisms is demonstrated in the nasal secretion.

Case 3: E. S., aged eleven, gave a history of "severe sinus trouble." Several nose and throat operations gave no relief, in fact, probably made him worse. Eosinophiles were noted in the nasal secretion. They were moderately increased in the blood. Allergic management has resulted in marked improvement. Had it been instituted earlier many operations might have been avoided. This patient has been observed for three years. He has gained twenty-five pounds and has been almost free of nasal symptoms until last winter; some of his nasal symptoms returned after he ate some foods to which he was clinically sensitive.

On the basis of symptoms alone, allergy may simulate acute or chronic infection. Correct diagnosis may be established only by repeated study of the nasal secretions. Hansel has emphasized the value of the allergic investi-

gation before recommending nose and throat operations. Our long experience has brought us to believe that a nasal smear should be a routine procedure before all respiratory operations, especially tonsillectomy. This routine would eliminate a number of needless nose and throat operations. The past few years has witnessed better co-operation between the Pediatrician, the Otolaryngologist and the Allergist. By this cooperation unnecessary tonsillectomies may be avoided.

Is the eosinophile related to the immunologic response? For many years it has been recognized that eosinophilia will fluctuate with immunologic reactions. It is particularly significant in nasal allergy that when the pH of the nasal secretion falls low or toward the acid side there is a complete disappearance of the eosinophiles. When the pH returns to the alkaline side there is a return of the eosinophiles. Kaufman states that "The relationship between eosinophilia and allergic disease is not clear."

Three primary sources of the eosinophile have been considered: (1) the local shock tissue, (2) the blood, and (3) the bone marrow or other blood-cell forming organs.

Some observers believe that eosinophiles may be formed in the local tissues. Salaris and Guarnari reported the following ingenious experiment:

Fifteen patients suffering from bronchial asthma or allergic rhinitis were tested intracutaneously with specific allergens. Blood was drawn from the finger tip at five, twenty, forty and sixty minutes, respectively, after the onset of the positive cutaneous reaction and the percentage of eosinophiles was determined. An increase in eosinophiles was noted within five to twenty minutes. This increase was more pronounced in the blood taken from the arm on which the cutaneous testing was performed. This finding, according to the authors, is suggestive of the local origin or eosinophiles. Their findings could not be duplicated in an extremely sensitive individual.

Patient C. R., aged twenty-two, was admitted to the hospital in December 1942, in severe shock, unconscious and with compound fractures of both legs. No tetanus antitoxin was given because the history suggested a severe sensitivity to horse serum. The allergic symptoms were asthma, urticaria, rhinitis and gastro-intestinal upsets to certain foods. An allergic survey was done several weeks later during the convalescence.

Intradermal Skin Tests

Positive tests were obtained to many foods and inhalants:

Dust (1-10)	+++	Mustard	++++
Grass (1,000 PNU/cc)	+++	Peanut	++++

Tests for mustard and peanut were performed at one sitting. A constitutional reaction resulted.

Results of Tests

Horse serum		Horse dander	
1-1,000,000	+	1-4,000,000	0
1-100,000	+++	1-400,00	+++
1-1,000	++++	1-40,000	++++

At the time of the skin test to horse dander, 1-40,000 dilution the blood showed three per cent eosinophilia. Fourteen minutes later there was a two per cent eosinophilia and the horse dander reaction was four plus.

Occasionally it is necessary to study the eosinophile content of other tissues

or body secretions depending upon the nature and location of the allergy. Eosinophiles may occur in large numbers in the stools of patients suffering from gastro-intestinal allergy, in the urine in urinary system allergy, in sections of nasal polyps, or in the appendix and other pathologic tissues. Antral washings may be quite revealing. Operations on the nose of patients with nasal allergy may be instrumental in aggravating the allergic symptoms. Dutton suggests that frequently allergic reactions precede the infection of appendicitis just as there are seen infections superimposed on allergic asthma. He based his conclusions upon a detailed study of the eosinophiles noted in the pathologic sections from one hundred and twenty-three appendices removed in cases of appendicitis.

An increased eosinophilia in the blood may occur in other disease processes, such as in parasitic infestation, consequently one should be cautious in considering an eosinophilia to be allergic in origin in the presence of any other disease associated with this phenomenon. Pulmonary eosinophilic infiltration of "Loeffler's syndrome" is considered by many as an allergic reaction. Communications from military observers from many parts of the world point out that eosinophilia is noted in many diseases occurring in the tropics other than those suspected previously. Some of these observers believe that occasionally the eosinophilia is similar to that found in "Loeffler's syndrome." Familial eosinophilia has also been reported on several occasions. Our observations would indicate that the presence of five per cent eosinophiles in the blood or above is an increase.

Other observations included patients who were followed for many years with repeated nasal smear studies as the irregular variation of nasal symptoms occurred. The cytologic findings of the nasal smears were correlated with the clinical histories, the skin tests, the x-rays of the sinuses, the bacteriology and histopathology of the tissues, and other laboratory data, in order to make practical interpretations of the cellular and bacteriologic reactions in the secretions. The value of the examination as noted in the secretions from the sinuses was emphasized by Tillotson and by Sewall and Hunnicut.

Methods of Collection of Exudate and Preparation of Nasal Smears It is often quite impossible to draw conclusions from the examination of a single smear of secretion. It may be necessary to make an examination of several smears over a period of time. This is especially true if acute or chronic infection complicates the picture. Occasionally a repeat study may be necessary because the initial specimen does not contain sufficient material. In the collection of secretion for smear examinations several methods may be employed:

1. The patient blows his nose upon wax paper or cleansing tissue.

2. In small children a small cotton swab is placed into the nose or a pharyngeal swab is used.

3. In the office, when the nasal mucosa is fairly dry, swab-stimulation is used. This method has not been satisfactory. It is time-consuming and as a rule only watery secretion and epithelial cells are obtained.

4. In experimental research, biopsies of the nasal mucosa are sometimes obtained.

5. The material is obtained by some

investigators by having the patient "hawk" where a post-nasal discharge is present.

6. Sputum may be used and a deep specimen may be obtained by the bronchoscope. We do not favor this method for cytologic examinations because at times in the sputum loads of eosinophiles are obtained without one being able to demonstrate allergy.

In our office and clinics the first method is preferred because of its simplicity, and because a majority of patients usually have considerable nasal discharge at irregular times. Also in this way the secretion is brought out of the anterior portion of the nose which seems the most satisfactory. If secretion is not available at the time of the examination the patient is given a packet of two clean slides, toothpicks and cleansing tissue. He is instructed to make two slides at different times and to bring them to the clinic or office at the next visit. If the patient is well instructed, this method is very successful.

At the time when changes occur in the symptomatology another smear should be examined. A smear might be indicated to determine whether or not a common cold has developed. It is very important to follow these changing conditions by repeated examinations.

Occasionally it may be noted that there is a difference in the cytologic picture in specimens taken from each side of the nose. Secretion from the individual sinuses may be obtained by aspiration or by punctures and washing. A gob of mucoid material is usually the best secretion for smears, or the returned fluid may be centrifuged.

In the collection of secretion for examination it might be noted that great variations may occur as to the quantity and quality of the material available. In the same patient at various times it might be quite different, ranging from heavy pus to watery secretion. It is good to obtain a smear of all these different types. Cells usually collect in large numbers in the mucus, whereas watery secretion flows very freely and does not collect the cells. The color or consistency of the secretion is frequently not an index of the cytologic content. Clear secretion may contain many eosinophiles or many neutrophiles, or it may contain varying proportions of both types of cells, or as in many cases no cells at all. Yellowish secretion usually contains a marked predominance of neutrophiles but may contain many eosinophiles.

Several slides should be prepared using all types of secretion available at one time or different times. When patients are preparing the smears they should be shown just how much secretion should be placed on the slide. The smear should not be too thin. A real thick smear is almost impossible to examine under the microscope.

Staining Technics In the preparation of nasal smears for microscopic examinations various polychrome blood cell stains have been used in our laboratory, especially Giemsa, Wright's, eosin-methylene blue and Hansel's. Although many claims have been made for some of these stains, they all perform about the same. In our hands none have stained any better than Wright's. The student should be encouraged to use Wright's stain because if a physician has one stain available and fresh in the office, it is usually Wright's stain. Thus the student and physician will

note the value of nasal smears and they will discover that nasal cytologic examinations are as simple as differential blood counting and often as important.

The simple method using Wright's stain is as follows: The patient blows his nose with cleansing tissue when he has a lot of secretion to blow out. With a clean toothpick, using the blunt end, a gob of secretion, thin but sufficient in amount, is spread on the slide and allowed to dry in clean air. After it has completely dried, the Wright's stain is applied and then the distilled water. These should be mixed by gentle tilting. Wash the mixture from the slide with tap water. As a general rule the staining times are one-half that needed for blood smears. Stand the slide on end or dry over a small electric bulb. Do not blot.

Study of Slides The Wright's solution will stain bacteria as well as cells. Therefore, all slides should be examined with the oil emersion lens as well as low power and high power magnification. This is essential to recognize bacteria which stain blue and to bring out cellular details. The oil immersion lens limits the size of the field being studied and more time is required. A cover slip need not be used.

Interpretation In allergy the pathologic picture is characterized by eosinophilic infiltration and edema. When secretions are involved, eosinophiles signify the presence of the allergic process. In purely inflammatory or infectious processes affecting these same structures the cytologic repsonse is expressed in terms of neutrophiles or pus cells.

No cell should be designated as an eosinophile unless its characteristics are definitely identified. These characteristics are:

1. It is larger than the neutrophile.
2. The cellular membrane is fragile and many broken cells with loosely scattered eosinophilic granules may be observed.
3. The nuclei are usually two in number and stain blue.
4. The cytoplasm is filled with large acidophilic granules which stain brilliantly orange-red.

In allergic conditions, the degree of eosinophilia of the secretions is proportional to the severity of the symptoms and reactions. In milder cases of nasal allergy, eosinophiles are present in comparatively small numbers, while in hayfever large masses of the cells may be demonstrated.

Infections are characterized by neutrophilic infiltration; consequently only this type of cell is found in the secretions. In the resolution stage of a common cold only a few scattered eosinophiles will be seen mixed with large numbers of neutrophiles. Infection of the respiratory tract often complicates the allergic picture and its presence should be recognized and treated. If an infectious process complicates allergy of the respiratory tract, the eosinophiles may completely disappear from the secretions during the active stage of the infection but return after the resolution stage has been reached. If resolution is delayed or does not occur the neutrophilic picture persists. The superimposition of a chronic suppurative process with the absence of eosinophiles is rare. Secondary infection of the saprophytic type will often show a mixture of eosinophiles and neutrophiles. This picture is common in cases of nasal polyps in which stagnation of the se-

cretion has occurred.

Although preliminary experiments have been inconclusive some observers have presented sufficient evidence to suggest that the production of eosinophiles is in some manner related to the release of histamine. Code has shown that the principal source of histamine in the blood stream is probably the circulating eosinophiles. To explore this premise a patient with exfoliative dermatitis was given intravenously the salt equivalent of one mgm. of histamine. At the time of the injection the eosinophile count was three per cent and twelve hours later it was five per cent. This was not a significant rise. A higher count might have been seen earlier. Moon, Lieber and Kennedy showed that in normal individuals after the intravenous histamine, leukocytosis took place in three to five hours.

The cytoplasm of the polymorphonuclear cells of the dog is almost devoid of stained material and relatively few eosinophiles are present. In contrast to this the polymorphonuclear cells of rabbit blood contain eosinophile granules. This is the normal appearance of rabbit blood and the cells have been referred to by hematologists as pseudo-eosinophiles. These observations in animals might suggest that reversible chemical compounds in the cytoplasm of the polymorphonuclear cell determine the size and staining qualities of the granules.

The clinical observer should evaluate the significance of the smears at the time of the examination of the patient. An allergy laboratory in the clinic to facilitate handling of the slides is a distinct advantage.

In the cytologic examination all the elements in the smear should be observed and recorded. The organisms can easily be identified for they stain blue or purplish with the stains mentioned previously. The type of organism can often be identified. When the slide shows many organisms, a bacteriologic study of the secretion is indicated.

The eosinophiles may be very unevenly distributed or they may be conglomerated in a clump of mucus. One clump in the entire specimen may show hundreds of eosinophiles. An occasional eosinophile especially in children may be regarded as normal. A few neutrophiles are normally observed.

The presence of epithelial cells does not signify anything pathologic. In a case of sarcoma of the maxillary antrum many sarcomatous cells were noted in the nasal smear. The diagnosis could have been made without the smear but it did give additional help.

Major Types of Responses

1. Allergy			
E ++++	N 0	Or 0	Ep +—
2. Infectious			
E 0	N +++	Or ++	Ep +—
3. Bacterial Allergy or a Secondary Infection on top of an allergic response			
E ++	N +++	Or +++	Ep +

E-Eosinophiles
N. Neutrophiles
Or—Organisms
Ep-Epithelial cells

These three general classifications should be employed in the diagnosis of rhinitis and sinusitis.

Vasomotor rhinitis of the endocrine-sympathetic nervous system type usually has a profuse watery secretion with almost no cellular content.

The secretion in cerebrospinal rhinorrhea has the characteristics of spinal fluid.

Although eosinophiles may be present in large numbers in the nasal secretion with the development of an acute coryza, they rapidly disappear.

The following case illustrates this point:

The patient, M. C., aged 28 years, was seen at the clinic, December 19, 1940. She stated that "hives" appeared one-half hour after breakfast Wednesday, December 19, 1940. They had extended over the entire body but were relieved by an injection of epinephrine. She thought a "cold" was developing for a period of two to three days. Her nose was running and she was sneezing. A thyroidectomy had been performed on her several years ago but the last basal metabolic rate was minus ten. Her menstrual periods were regular and the last one was finished four days previously. There was no allergic history.

Food taken the day before consisted of:

eggs*, coffee*, sugar, salmon, vanilla, cheese*, wheat*, milk*, apple*, chocolate, molasses, and potato.

*denotes the foods that were taken in large quantities but these were negative on intradermal testing.

December 20, 1940. The urticaria continued. The basal metabolic rate was minus eight and the temperature 98.6° F.

December 21, 1940. A nasal smear showed:

E ++++ N +− Or O Ep O

Later in the afternoon of December 21st the nasal secretion increased and the next day the patient had a definite respiratory infection. Coincidentally, the urticaria disappeared.

December 25, 1940. A nasal smear showed:

E O N + Or ++++ Ep +

Hansel states: "In evaluating the number of neutrophiles in the secretion one must take into consideration that the neutrophilic response is always greater than the eosinophilic response and that the number of neutrophiles usually out-numbers the eosinophiles about ten to one, therefore, a plus-minus or a plus one of neutrophiles represents about ten times as many eosinophiles. In a smear with four plus neutrophiles the field is completely covered with them.

Discussion In the foregoing it has been pointed out that a pure eosinophilic response in the nasal secretions is indicative of the occurrence of allergic reactions in the local tissues. It has been further explained that acute and chronic complicating infections superimposed upon an allergic process are characterized by a neutrophilic response in the secretions. A chapter about the cytology of the secretions in allergy may be found in Hansel's "Clinical Allergy." A brochure may be requested from the Lide Laboratories of Saint Louis, Missouri, which shows four color plates of the common cytologic responses seen in the nasal secretion.

Repeated cytologic examinations of the secretions of the nose and paranasal sinuses as a diagnostic procedure, and as a means of determining the clinical course in relation to complicating infections, are of inestimable value in the study of many medical cases. The demonstration of eosinophiles in the secretions is good presumptive evidence of the existence of active allergy. The presence of neutrophiles is an indication of the existence of superimposed infection. The eosinophilic-neutrophilic proportions are an index of the nature

and stage of the infection. By repeated observations of the cytology of the secretions, acute and chronic infections can be differentiated. On the basis of clinical evidence, a pure eosinophilic response as a result of pure bacterial hypersensitiveness has not been definitely substantiated but has been proposed by Cooke.

It is interesting to note that these tables show that the nasal smear was used more often as a part of the allergy survey in 1953 than it was in 1944.

Nasal Smear Studies on One Hundred Consecutive Patients Visiting the Allergy Clinic in 1944

Number of patients		100
Number of nasal smears		60
Eosinophiles only	7	
Eosinophiles and Neutrophiles	6	
Eosinophiles and organisms	9	
Eosinophiles, neutrophiles and organisms	27	
Neutrophiles only	3	
Organisms only	4	
Neutrophiles and organisms	3	
Number not ordered		21
Number ordered but not obtained		13
Number obtained without sufficient material for recording results		6

Nasal Smear Studies on One Hundred Consecutive Patients Visiting the Office in 1953

Number of patients		100
Number of nasal smears		82
Eosinophiles only	1	
Eosinophiles and neutrophiles	51	
Eosinophiles and organisms	0	
Eosinophiles, neutrophiles and organisms	11	
Neutrophiles only	10	
Organisms only	1	
Neutrophiles and organisms	8	
Number not ordered		6
Number ordered but not obtained		11
Number obtained without sufficient material for recording results		1

Conclusions

1. With a presentation of case histories and clinical and laboratory observations the diagnostic value of the nasal smear in allergic states has again been emphasized.

2. Simple methods of collecting, staining and studying nasal smears have been presented.

3. All the elements in the nasal smear should be observed and recorded.

4. A more general diagnostic use of this procedure should be employed.

5. The controversial relationships between histamine release and eosinophilia have been discussed.

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Ectopic Pregnancy

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This is a plea for improvement in early diagnosis of ectopic pregnancy which at the present time is unrecognized in at least 50% of cases coming to exploratory laporatomy.

In these days of high hospital and laboratory costs it behooves the physician to ever keep in mind this rather common mishap for women in the child bearing age. In order to accentuate this point it is here asserted that such a patient may be considered at least not adequately served if the diagnosis is not made at the time of the first visit by a physician. From many years experience in teaching the subject to medical students, interns, and residents, I am convinced that any physician may with little effort learn to quickly recognize the condition which is often seen first by the general practitioner. I know a number of general practitioners who are quicker at arriving at the correct diagnosis than the bulk of the specialists but they have been trained along the lines of this following concept. However if any reader is able to so diagnose 9 out of 10 cases on the first attendance to the patient he needs to read no further. Thirty years ago, Heaney[1] stressed four points in the diagnosis but these have largely been ignored by the more recent writers. Because of the confusion of symptoms of ectopic pregnancy with those of salpingitis (pelvic peritonitis), threatening uterine abortion and not infrequently appendicitis one needs a sort of syllabus in mind to constantly be on guard against failure to consider ectopic pregnancy. If the patient presents the following four signs or symptoms: abdominal pain, vaginal bleeding, pelvic mass, usually to one side, and history of amenorrhea she may be considered as having ectopic pregnancy.

Abdominal Pain Invaluable in the study of every candidate for ectopic pregnancy is the intelligent record of this history of the abdominal pain. A patient is well up to a certain point of time; 30 minutes later she is sick in bed having had as a rule a sudden severe cutting pain in the abdomen usually in one lower quadrant but rarely it may be so high as to present evidence of a ruptured duodenal ulcer. If the bleeding is rapid and profuse enough to allow the blood to reach the diaphragm, there is almost certain to be irritation with sharp pain in the upper abdomen or in the shoulder. There may be painful breathing as in acute pleuritis. A simple test where intra-abdomi-

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nal bleeding is profuse is to elevate the foot of the bed and watch for the above symptoms to occur. Accompanying the onset of pain is a feeling of faintness, she usually feels hot and beads of perspiration stand out on the forehead. She almost invariably seeks to lie down although she may be up a short time later depending upon the degree of pathology and amount of intra-abdominal hemorrhage. Or she may stay in bed a day or more up to a week or so but sooner or later she is likely to be up and around when in due course of time most surely another such episode appears. Some will have 3 to 4 of these before diagnosis is made and operation performed. While the pain may be quite generalized in a somewhat distended abdomen the patient on close questioning will usually indicate the true side upon which the pathology exists. The incidence of pain in our series was 96%.

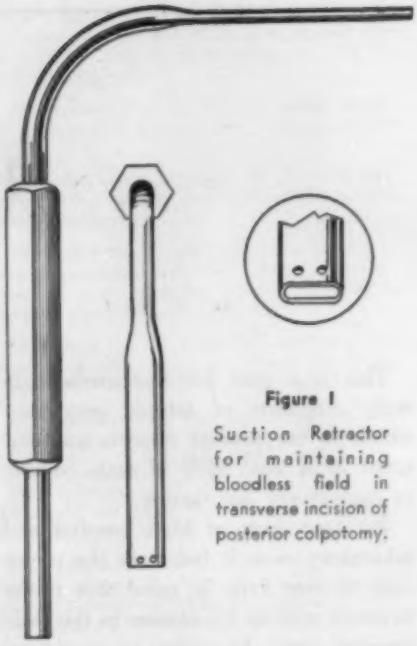

Figure 1

Suction Retractor for maintaining bloodless field in transverse incision of posterior colpotomy.

Vaginal Bleeding Soon after the pain begins there may be bleeding from the vagina which is often a mere spotting but may on occasion be very profuse. The patient often mistakes it for a menstrual period or as a threatened abortion. It occurred in 92% of our cases.

Pelvic Mass The third cardinal symptom is a lateral pelvic mass or its equivalent which may be a doughy feeling in the distended cul-de-sac of Douglas or an exquisite tenderness on motion of the cervix. The least sudden movement, in any direction, of the cervix causes the patient to have immediate almost involuntary contractions of her abdominal and spinal muscles. It seems that this type of pain on very short but quick movement of the cervix is much more sensitive in ectopic pregnancy than in inflammatory disorders. This examination must be extremely gentle-or further hemmorhage may be induced. Such has occurred many times in the long story of ectopic pregnancy. In our cases a mass was palpable in 62 of 66 patients vaginally examined.

Amenorrhea The fourth diagnostic point, amenorrhea, is usually less commonly found than any of the other three, occurring ordinarily in 50 or 60 per cent of reported cases. One factor for this is that the ectopic pregnancy, implanted as it is in other tissue than uterine endomentrium, is apt to erode into an uncontrollable blood vessel even as early as, or earlier than, the next due period, and there is then an apparent attempt to abort the products of conception, resulting in vaginal hemorrhage when the endometrial tissues are shed. If this occurs, as quite often it does near

the time of the next period, it is mistaken for the expected menstruation.

In 80 cases there was a history of amenorrhea of at least four days in 57 cases, none in 19 instances, and no record in 4 instances. Among the reported cases amenorrhea was present in 75 per cent. The duration beyond the missed period was a few days to one week in 6 cases, 10 days to two weeks in 7 cases, one month in 9 cases, two months in 20 cases, three months in 7 cases, four months in 3 cases, five months in one case and six months in 2 cases.

Besides these four cardinal points there are a few other valuable findings, especially fluid wave, otherwise unaccountable anemia, high pulse rate in relation to temperature, and surgical collapse. Fluid wave of recent onset in a woman of childbearing age without edema of the extremities is very suggestive of intra-abdominal hemorrhage due to ectopic pregnancy. Fluid wave was found in 20%. Marked acute anemia not otherwise accounted for should cause one to suspect ectopic pregnancy in the differential diagnosis of an acute abdominal condition in women of childbearing age. Likewise an unaccountably rapid pulse or shock and hypotension in a woman of this age with other abdominal symptoms should lead one to consider ectopic pregnancy.

When a woman in childbearing age is bleeding vaginally, not a typical menstrual period, and she has pelvic pain, a pregnancy either uterine or extra-uterine should always be considered. If the pain is more intense in one side, the diagnosis points more to ectopic pregnancy than to threatened abortion.

If each physician would keep in mind that one in approximately 50 of his pregnancy patients once in her lifetime is destined to have an ectopic pregnancy, and in all pregnancies to consider vaginal bleeding, especially if associated with abdominal pain, as suggestive of ectopic pregnancy, and then to confirm or deny the suspicion by intelligent vaginal examination, the incidence of neglected cases would be decreased. Each patient in early pregnancy should have a vaginal examination at each visit until the examiner can honestly write into her chart that this pregnancy is intra-uterine. Then as a rule vaginal examination is not necessary until 6 or 8 weeks before term. Furthermore, the occurrence of full term abdominal pregnancy with the attendant danger to fetus and mother could be admirably reduced. In addition, if every instance of appendicitis in women of childbearing age, and every instance of acute salpingitis, especially if there is coincident vaginal hemorrhage, were considered as possible ectopic pregnancy, the incidence of early diagnosis would be enhanced.

Study of the literature and of case histories shows that the conditions confused with ectopic pregnancy in approximate order of incidence are: salpingitis, uterine abortion, appendicitis, ovarian cyst, fibromyoma, intra-uterine hemorrhage from corpus luteum cyst and rarely hematoma of the rectus muscle.

In my opinion, it is misleading to place much emphasis upon the following findings: temperature, white cell count, sedimentation tests, pregnancy tests, nausea and vomiting. The temperature may be as high as 103° without evidence of infection. The white cell count was less than 10,000 in one-third of the cases, from 10 to 15,000 in one-third and above 15,000 in one-third of the cases. The sedimentation rate is

inconclusive and no report places much value upon it. Pregnancy tests take too long and not infrequently are confusingly negative, due, no doubt, to the early destruction of the embryo and trophoblast. We found value, however, in the two-hour test in that there is no accompanying delay in operating upon the patient. Nausea and vomiting may be associated with the pregnancy as well as with appendicitis and acute salpingitis. X-ray is of value in some cases of advanced abdominal pregnancy, but in our experience, it has more often confused than aided in the diagnosis. In the rare type of late broad ligament pregnancy with distortion and possible obstruction of the bowel or ureter x-ray study with radiopaque material in these structures may be pathognomonic of the exact condition.

Whenever there is reasonable doubt in the diagnosis of ectopic pregnancy, a posterior colpotomy is so relatively safe and so often insures the diagnosis that it should be used more frequently. In our study it ruled out the question of ectopic pregnancy in probably a half dozen suspected cases which proved to be otherwise, not included in the series. The colpotomy should be by transverse incision close to the posterior wall of the cervix, securing hemostasis before incising the peritoneum, so as to be able to determine the presence or absence of intraperitoneal free blood or clot. If there is free or old blood in the cul-de-sac the diagnosis of ectopic pregnancy is usually confirmed, although rupture of a corpus luteum cyst or of a corpus rubrum may rarely cause intra-obdominal hemorrhage. If there is no intra-abdominal bleeding the tubes and ovaries should be inspected by gently drawing them down to the opening. In the past 80 cases colpotomy was done in 15 white women and 16 Negro women. In addition it was done in probably one-half dozen other women suspected to have ectopic pregnancy but found to have another condition, as threatened or incomplete abortion, pelvic inflammatory disease, etc.

We have found useful a colpotomy suction retractor, Fig. 1, which aids in maintaining a less bloody field while incising the peritoneum. As a rule, however, the blood in the cul-de-sac is old and dark, easily distinguished from fresh blood of the incision and it leaves a stain on white gauze unlike that of fresh blood.

In the diagnosis of late ectopic pregnancy, a history of undue abdominal pain associated or not with episodes of vaginal spotting during pregnancy should induce the obstetrician to consider abdominal pregnancy. Even then it is often difficult to be sure that the fetus is not intra-uterine, even after thorough x-ray studies. Any transverse presenting fetus at term, especially if high in the abdomen, should lend support to the possibility of extra-uterine pregnancy.[2]

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Bleeding During Pregnancy

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There is no phase of obstetrics that is more important than the diagnosis and management of vaginal bleeding. It was thought feasible to classify the causes of bleeding into the trimesters of pregnancy as near as possible for the sake of brevity and clarity.

First Trimester

A. ABORTIONS (inevitable, threatened, incomplete) Undoubtedly abortions account for the most frequent cause of vaginal bleeding in the first trimester.

1. Incidence—About 10% of pregnancies are terminated in abortions.[12]

2. Management—Conservative therapy is recommended in threatened cases with sedation, bed rest, thyroid, progesterone and estrogens in high doses. Although faulty ova are the cause of over 50% of abortions,[12] estrogens and progesterone apparently may be of value in some cases. For incomplete abortions, the patient should be given oxytocics, transfusions if necessary, and should receive a therapeutic curettage if afebrile.

B. ECTOPIC PREGNANCY — Tubal pregnancy and to a much lesser extent ovarian and abdominal pregnancy may manifest itself in any trimester, but tubal pregnancy particularly in the ampullary portion occurs usually in the first trimester.

1. Diagnosis—This is obtained by history and physical examination. One usually elicits a history of menstrual irregularity but not always. The cul de sac puncture is an invaluable procedure, and should be performed if the work-up is the slightest bit suggestive of an ectopic.

2. Treatment—The therapy is replacement of the blood loss and definitive surgery.

Second Trimester

A. INTERSTITIAL PREGNANCY—This form of tubal pregnancy usually occurs later. The patients are more inclined to be admitted in profound shock. The treatment may involve a cornual resection of the uterus or a hysterectomy.

B. CERVICAL PATHOLOGY

1. Chronic Cervicitis—Chronic cervicitis is the most common cause of bleeding in the pregnant woman in the second and third trimesters of pregnancy, but may of course occur at any time. I am referring to any type of

bleeding per vaginam and not excessive hemorrhage, as there are more common causes of profuse bleeding per vaginam.

These "ugly" cervices should be routinely biopsied as the damage of infection and severe hemorrhage is minimal. A tampon or vaginal pack should be inserted for 24 hours after the biopsy. Out of numerous biopsies, we have seen no abortions but several patients returned with hemorrhage from the biopsy site and had to be repacked with gelfoam.

Epidermitization, basal cell hyperactivity and glandular hyperplasia is more prone to occur in the pregnant cervix. Deciduosis of the cervix is not uncommon and may be a cause of bleeding.

2. Carcinoma in situ — It is not deemed pertinent to get into a discussion about this condition except that it appears to be reversible in some instances, and the cases should be handled with extreme caution.

3. Carcinoma—Early carcinoma of the cervix occurs more commonly than is generally thought. Hirst[1] found an incidence of .075% by routine screening with Papanicolaou smears. The management of carcinoma of the cervix in pregnancy depends upon the gestation of the foetus.

C. VULVO-VAGINAL PATHOLOGY

1. Varicosities—Varicosities may be associated with bleeding in any trimester, but more commonly at term or during labor or delivery.

2. Granulomatous Lesions—Bleeding may occur from condylomata acuminata, lymphogranuloma venereum or granuloma inguinale. A biopsy should always be obtained to rule out malignancy, and aid in the diagnosis as well as a Frei test, scraping for Donovan bodies, and a darkfield examination.

3. Chemical Burns—Chemical burns such as potash douches are frequently seen in patients attempting abortion and may result in excessive hemorrhage.

D. DECIDUAL BLEEDING—Power[2] presented 13 patients who exhibited vaginal bleeding during the first four to five months of pregnancy who were later shown to have decidual bleeding. The menstrual histories were abnormal in over one half of the cases.

1. Treatment—Therapy is conservative according to Power with the endocrines of little or no value.

2. Pathology—This consists of degeneration and round cell infiltration of the decidual area with layers of decidua usually found adherent to the maternal surface at delivery.

E. PLACENTA PREVIA, ABRUPTIO PLACENTAE AND PLACENTA CIRCUMVALLATA—These conditions may occur in the second trimester contrary to the general belief.

Third Trimester

A. PLACENTA PREVIA—This is the most common cause of severe intrapartal hemorrhage in the third trimester. Any painless bleeding in placenta previa until proven otherwise.

1. Types—The types are centralis, partialis, and marginalis.

2. Etiology—Multiparity and endometritis associated with low implantation of the placenta are thought to be the most common factors in the etiology. It should be emphasized that this condition occasionally occurs in the primigravida.

3. Incidence — 1:183 according to Stander.[3]

4. Diagnosis

a. *Examination*—Patient should be

typed, matched, infusion started and section room should be set up. Initially the cervix should be inspected and the lower uterine segment palpated.

b. *X-Rays*—The diagnosis can be aided or substantiated by taking soft tissue x-rays and also by injection of sodium iodide or air into the bladder and taking additional films.[4,5,6]

5. Treatment—Treatment should be conservative if viability has not been reached or the baby is extremely small. The patient should be on bed rest and should receive transfusions as needed. If hemorrhage is excessive, one's hand may be called.

Cesarean section is recommended for the centralis or partialis if the implantation of the placenta is such as to cover over 35% of the space at the internal os. For the marginalis and certain of the partialis types, rupture of the membranes and intravenous Pitocin induction is advocated. This should be done if the presenting part is fitting the cervix and is in the pelvis. Stallworthy has emphasized that it is extremely dangerous to rupture the membranes if the head will not engage as the concomitant hemorrhage may be uncontrollable. He thinks that a posterior placenta may actually prevent engagement in some instances[3].

B. ABRUPTIO PLACENTAE-This is inaugurated by an effusion of blood into the decidua basalis producing a decidual hematoma with subsequent bleeding.

1. Types—The types may be divided into concealed hemorrhage or revealed hemorrhage which is self explanatory or may be divided into toxic and non-toxic types. The former is associated with toxemia and occasionally with eclampsia. The toxic type may culminate in a Couvelaire uterus with hemorrhage into the myometrium and serosal surface of the uterus.

2. Etiology—The cause is unknown. The non-toxic type is more common than the toxic. Multiparity and endometritis may be a factor in the premature separation of a normally implanted placenta.

3. Incidence—About 1:300 according to Stander.[2]

4. Diagnosis

a. *History*—Bleeding in the third trimester which is most commonly associated with pain which may be severe is suggestive.

b. *Physical* examination is pertinent including BP and FHT as in any bleeding case. The abdomen may be board-like. A sterile vaginal should be performed after the type and match and a transfusion instituted if necessary. Placenta previa must be ruled out.

c. *Lab. work*—A hematological survey is imperative.

5. Treatment

a. *Toxic*—If the patient is a multipara with a favorable cervix, rupture of the membranes, I.V. Pitocin induction with ten minims per 1000 cc. of 5% dextrose in D. W. is advocated. If the patient exhibits excessive blood loss with or without a bleeding tendency with a suspected Couvelaire uterus with an unfavorable cervix, a Cesarean section is advocated. If the uterus fails to contract, a section hysterectomy is indicated. If the patient exhibits a bleeding tendency, fibrinogen should be given.

b. *Non-Toxic*—Rupture of membranes and Pitocin induction is advocated.

6. Pathology—On inspection of the placenta of the toxic type, the cotyledons are replaced by a central clot usually of recent origin which accounts for the invariable death of the fetus unless there

is a velamentous insertion of the cord. There also may be evidence of old infarction. In contradistinction the non-toxic type has a peripheral clot which may or may not be extensive. Rarely a central clot in the placenta may be associated with a patient who does not show any evidence of toxemia.

C. RUPTURE OF MARGINAL SINUS IN A NORMALLY IMPLANTED PLACENTA—This entity was thought to be extremely rare having been demonstrated infrequently by the author; however, Fish found this condition in 33.9% of his cases of severe hemorrhage in the third trimester.[9]

1. **Incidence**—Occurred in the same frequency as placenta previa in Fish's series.

2. **Diagnosis**—Placenta previa shows more of tendency to be associated with recurrent bleeding and can be ruled out by sterile vaginal and diagnostic x-rays. Abruptio placentae is frequently associated with toxemia. Rupture of marginal sinus is more likely to occur during labor according to Fish.[9]

3. **Treatment**—The patient should receive type and match, transfusion, nasal oxygen on the same measures which should be for any excessive vaginal bleeding. On sterile vaginal, after placenta previa is ruled out, the membrances should be ruptured and Pitocin given judiciously. Undoubtedly this condition is more common than is generally realized. The placenta should be carefully studied after the third stage of labor in all cases of bleeding.

D. VASA PREVIA—If the placenta is inserted in the lower portion of the uterus, the velamentous vesels may extend partially across the internal os. On one instance, I observed a spontaneous tearing of one of the vessels with subsequent fetal hemorrhage. The baby was delivered shortly afterward, was anoxic and lived twelve hours.

E. BATTLEDORE PLACENTA—Occasionally the cord is inserted near the periphery. Rarely this may cause trouble as a slight separation of the placenta over the involved area may produce fetal distress; the above condition has been observed on one occasion.[3,7]

F. PLACENTA CIRCUMVALLATA—Occasionally the original chorion frondosum expands and grows into the adjacent decidua. The vessels of the fetal surface end af an elevated white ring, which is made up of a double layer of amnion and chorion that have undergone infarction.

1. **Incidence** — 1:188 according to Hunt, Mussey and Faber[15] from the Mayo Clinic.

This condition has been observed by the author less frequently than placenta previa and abruptio placentae, but more commonly than with rupture of a marginal sinus. It should be mentioned that a circumvallate placenta occurs not infrequently in conjunction with abruptio placentae and has been described with placenta previa.

Recently the author observed a case with this anomaly accompanying a complete placental separation. I have observed several placentas of this type in which a normal delivery occurred and the patients denied any vaginal bleeding during pregnancy. In 23 of the 47 cases described by Hunt,[15] the anomaly did not produce any symptoms.

2. **Diagnosis**—A history of threatened abortion or of prolonged but usually not excessive bleeding during the first two trimesters can frequently be elicited according to Hunt and also Donnelly.[10]

Early rupture of the membranes with

premature labor may occur in about one third of the cases.

Bleeding as a rule is not excessive. Placenta previa can be differentiated by vaginal examination and diagnostic x-rays. Abruptio is accompanied frequently by toxemia, by abdominal pain, sometimes by a board-like uterus or an enlarging uterus.

Of course, the final diagnosis is made by an examination of the placenta.

3. Treatment—If the membranes rupture prematurely, the patient should be placed on absolute bed rest and penicillin.

The treatment of this condition is usually conservative unless accompanied by an abruptio placentae or some other placental anomaly.

Hemorrhage after the second stage of labor usually is associated with placental anomlies, trauma subsequent to delivery or occasionally uterine tumors. If bleeding is excessive, the placenta should be removed manually. This should be done in as aseptic a manner as possible and the patient should be placed on antibiotics.

G. PLACENTA ACCRETA — In rare instances due to apparently faulty decidua, the villi invade the myometrium or even the serosa. Manual removal is all but impossible which usually necessitates a hysterectomy.

H. PLACENTA SUCCENTURIATA — Accessory lobes of placenta are important as they may be retained and account for severe hemorrhage.

I. PLACENTA MEMBRANACEA — Rarely the decidua capsularis has such an excellent blood supply that the chorion laeve fails to atrophy and all of the fetal surface is covered by functioning villi. This condition may cause a severe hemorrhage in the third stage of labor. The treatment is manual removal which may be difficult.[5,7]

After the termination of the third stage, the perineum and vagina should be carefully inspected for lacerations. The cervix should be inspected in all difficult labors. If uterine rupture has occurred, a total section hysterectomy should be performed.

Inversion of the uterus is a rare condition which may be associated with bleeding at the termination of the second or third stage of labor. The etiology is unknown but probably frequently is due to traction on the cord or delivering the placenta in an improper manner, although 40% of Das' cases were spontaneous in nature.[14] If the inversion is acute the patient may exhibit shock out of proportion to the blood loss. The patient should receive blood transfusions as needed and the inverted uterus can be replaced with the sponge holders under ether anesthesia. If the cervix has clamped about the placenta, adrenalin is said to possibly aid in the relaxation of the cervix. Spinelli described a vaginal operation for replacement and Huntington an abdominal approach. If the inversion is chronic or of long standing, the patient should receive transfusions as needed and be placed on antibiotics prior to attempted replacement. A hysterectomy may have to be performed in the acute or chronic forms.

Postpartal hemorrhage should be anticipated if the patient has had an overdistended abdomen (e.g. twins, polyhydramnios, large baby), previous history of postpartal hemorrhage, prolonged labor or grandmultiparity. Infusions with Ergotrate gr. 1/160 should be used prophylactically in the previous mentioned conditions. If postpartal hemorrhage occurs, an Ergotrate infusion or Ergotrate in a transfusion should

be given as needed, a sand bag over the symphysis should be utilized and someone should massage the uterus constantly. If bleeding continues, the uterus should be packed with the Holmes' packer. If bleeding occurs through the pack, this procedure should be repeated. If bleeding is uncontrolled, a section hysterectomy may have to be resorted to. This procedure should practically never have to be performed for postpartal hemorrhage. A complete hematological survey should be done if unexplained bleeding occurs.

Hemorrhage may occur any time during the puerperium. Delayed postpartal hemorrhages are not uncommon and should be treated as previously outlined with intravenous Ergotrate, and blood transfusions after ruling out other causes of bleeding. I have seen bleeding result from unrecognized cervical lacerations or vaginal hematoma from a traumatic delivery or a bleeder in the episiotomy wound. The cervical lacerations should be repaired even if delivery occurred several hours previously. The vaginal hematoma should be evacuated and the bleeders ligated. The episiotomy wound should be closed primarily if possible. If the hematoma is extensive, the clots should be evacuated, hemostasis secured and then a vaginal pack applied leaving the wound open. These patients should be placed on antibiotics.

Another common cause of bleeding during the puerperium is retained secundines. These patients may continue to bleed in varying amounts and not infrequently develop an endometritis. The patients should be placed on oxytocics and antibiotics. Some patients may fail to pass all the products of conception, necessitating a curettage when afebrile. All placentas should be inspected at delivery to see if there are any cotyledons missing.

The placental polyp may be a cause of bleeding. Placental tissue attached to the uterine wall may form polyps. These polyps are reddish black and of friable consistency and usually have uterine sinuses at the bases.[13] Hemorrhage may occur when the polyps are partially separated and sometimes a cervical dilation and careful curettage may have to be performed.

Subinvolution of the uterus is not an infrequent cause of late hemorrhage. This condition is commonly associated with a low grade endometritis. The patients should receive oxytocics and antibiotics.

Summary

The causes of vaginal bleeding during pregnancy have been classified into trimesters. Emphasis has been placed upon diagnosis and management. It should be emphasized that a thorough gross and microscopic pathological study of all placentas associated with vaginal bleeding should be carried out.

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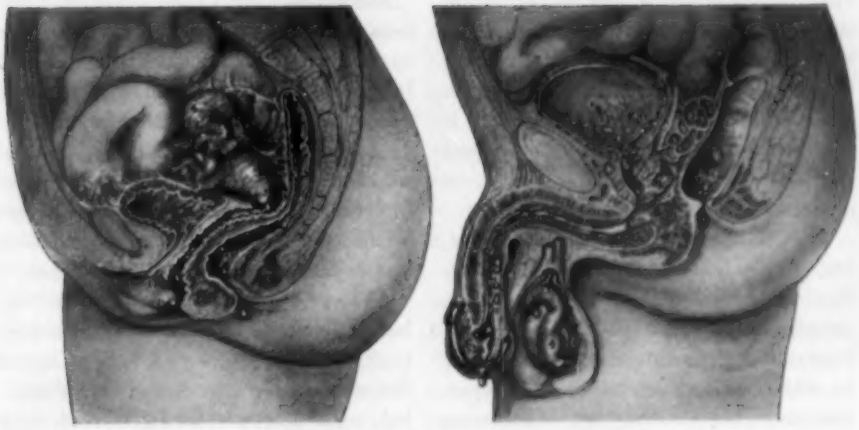
Grand and De Siard Streets

Clini-Clipping



Gonorrhea infections in female and male (after Winthrop).
Structures numbered alike behave in a similar manner when infected by the gonococcus.

FEMALE
1. Skene's and vestibular glands
2. Bartholin's glands
3. Cervix Uteri
4. Fallopian tubes
5. Rectum
6. Bladder

MALE
1. Parafrenal and paraurethral sinuses
2. Cowper's glands
3. Prostate gland
4. Epididymides and seminal vesicles
5. Rectum
6. Bladder

The Patient Teaches The Doctor

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Recently in one interview I learned a valuable lesson from a lady who has been a patient of mine for many years. The interview seemed to bring to the conscious level in my mind concepts which had before been on the sub-conscious plane, or at least not well organized in my thinking. It was as if pieces of a puzzle suddenly grouped themselves properly and a clear picture evolved.

This is not primarily a case report, but rather the reactions and thoughts that were brought out in me through association with this patient. The case history is far too voluminous to consider in detail but it shows her to be a hyper-reactor to her environment. Comments on the physical examination will be given.

The lady is 55 years of age and very intelligent. She is the only child of parents who were of good heritage. She is a perfectionist, has always been, and consequently has given too much attention on occasion to insignificant matters. As a brief example, she would record in great detail minute symptoms and signs incidental to the illness of anyone in her family, and she nursed her father and mother through long illnesses.

She would have made a great clinician because she missed no detail whatsoever in their complaints or physiological functions, and recorded such. She was well acquainted with numerous medicines and their effects, but would never trust her own judgment in giving them in the slightest variation from the prescribed manner even if such variation had been suggested by the physician.

She suffered from "spastic bowel" all her life. She has always been an ardent prohibitionist and would become quite distraught over any discussion of alcohol; also women smoking, though to a lesser degree.

When her invalid mother passed away, several years after her father, this patient went into a decline due to exhaustion. To complicate matters, her husband then became more unwell than usual and retired from his work. Her attention was then focused upon him and neither of them has been very well for the past two or three years.

The let down from exhaustion was of course to be expected, but she responded very slowly to any treatment—rest, sedation, encouragement. About 18 months ago she was suddenly seized with an attack of vertigo and has had a sensation of unsteadiness ever since but it is a bizzare type. She feels as if her body is in motion all the time but cannot describe it accurately.

At first I though she might have had one of those "little strokes" of which Dr. Alvarez writes, but she has not exhibited any neurological findings other than the unsteadiness which is subjective. She has for a long time been given to regurgitation of food. She is very allergic to phenobarbital but she can take secoharbital, belladonna and pentobarbital. Her nervous state and intestinal symptoms have been treated with questionable success with the above medications, together with alpha mono-brom-isovaleryl carbamide and occasional codeine.

Physical Examination White Female. Age 55. Weight 115 (the most she has ever weighed). Height 62 inches. Looks better than she has in many years. Skin a little dry, hair graying.

Head—ears—nose normal.

Eyes—reflexes good—nothing abnormal.

Mouth—reveals much dental work, tonsils out (20 years ago).

Thyroid—not enlarged.

Cervical Lymph Glands—not palable.

Chest Heart rate 80, regular rhythm, normal size, no murmurs. Blood pressure—120/90. Lungs—clear. Right breast a little cystic and tender for many years. Has had it checked for cancer many times. No axillary glands or supraclavicular glands. Left breast same size as right, but no tenderness.

Abdomen Tender, pretty well all over but has experienced this the greater part of the time for years. No organs palpable. Appendix out 20 years ago. Intestinal sounds a little accentuated on auscultation.

Pelvic Completely negative. Menopause 6 months ago.

Rectal Negative.

Reflexes Pupillary, elbow, abdominal, patella, achilles all perfectly normal. Plantar responses show absence of babinski's sign. Romberg negative. No tremor of fingers. Perspires easily and is cold natured.

Lab Work Urine—normal. R. B. C. 5,480,000: W. B. C. 3750—Hb 12.5 gm. Sed. rate 30. No x-rays in recent months but ones made a year or so ago showed "spastic bowel."

Now, to the lesson which she taught me. I was the first person to make the mistake of focusing on and stressing too much the fact of neurosis. She was seen by a very capable young internist to whom I referred her for consultation, and he also antagonized her by going at the neurosis factor in too emphatic a way too soon.

Some months later we were talking in my office, when I mentioned the neurosis factor indirectly. She said in effect, "Too much stress has been placed on the neurosis factor in my case and I am convinced in the case of many people. We know we are what is called neurotic and that we differ somewhat from the so-called normal, but I don't think it is right to have this constantly dwelt upon. So many speeches one hears, so many movies, so many TV and radio programs, so many magazine articles constantly dwell on neurosis. There is nothing in the world calculated to soothe. Everything is designed to build

up to further peaks of excitement, so how can one get better? We need to have provided conditions and surroundings upon which to improve but not to have our conditions talked about so much."

I am constantly having to learn over and over again to let the patient do most of the talking. Many patients say just talking helps them. I should know this well myself because in the past I have had two physician friends to whom I have gone just to talk. They wouldn't say very much but I always felt better.

We can't change this type patient, but we can help them to live with themselves in their departure from a so-called normal pattern. They resent having their nervous condition constantly kept in the foreground and feel that an unfair advantage is being taken of them. They feel that the physician either pities, or to a certain extent scorns them and either is repulsive. None of us would think of ridiculing another for a physical handicap, neither should we appear critical of a behavior pattern different from normal.

I am glad we have psychiatrists. These colleagues are perhaps the most poorly understood by other physicians and the public in general of any medical group. I want to give full credit to them for the wonderful work they are doing in the more severe cases which are out of the range of most of us who are general practitioners or specialists.

We must be very careful in our approach to the patient when we suggest any kind of psychiatric treatment or when we imply any emotional maladjustment, whether we indicate a desire to do something about it or refer them to a psychiatrist. The first reaction on the part of the vast majority of people is resentment, indignation, or plain anger and we must hastily dispel any ideas that we suggest this treatment because we think the patient is "queer" or "crazy."

In all fairness, I must say the psychiatrist frequently does not help very much in allaying these suspicions on the part of the patient at the first interview.

I do not write this to be unkindly critical of anyone but to be constructively critical and to remind myself as well as all physicians that we must consider the whole patient—physical being and personality.

My feeling is that most patients will fare better with the family physician when the patient is of such type as the one I have been referring to. We as family physicians must examine ourselves to be very sure that we are stable enough to assume the responsibility of any given case of emotional distress. There may be personality clashes in certain cases which will cause us to be inadequate for these cases.

Further than the pure art of medicine goes, I think that we have neglected something even deeper, namely, the spiritual component of the human personality. Many of us do this because we ourselves are not spiritually developed to where we can guide our patients. I think that I have missed helping people many times because I have not been spiritually mature enough to help them. I dare say the same is true of others.

If we but think of it, the well beloved family doctor of days gone by was nearly always a man of spiritual depth. He was in closer relationship with the Infinite than most of us are in this more scientific age.

I would in no way deprecate the

scientific component of the art and science of medicine. I think it is imperative to rule out the organic conditions which could cause a symptom complex, but we must always keep a sharp eye to a proper balance on the science and art of medicine; and most important, we must not neglect the spirit which to my mind is the ultimate in the component called the "Art of Medicine."

Clinic Building, 20 Commerce Street

Clini-Clipping

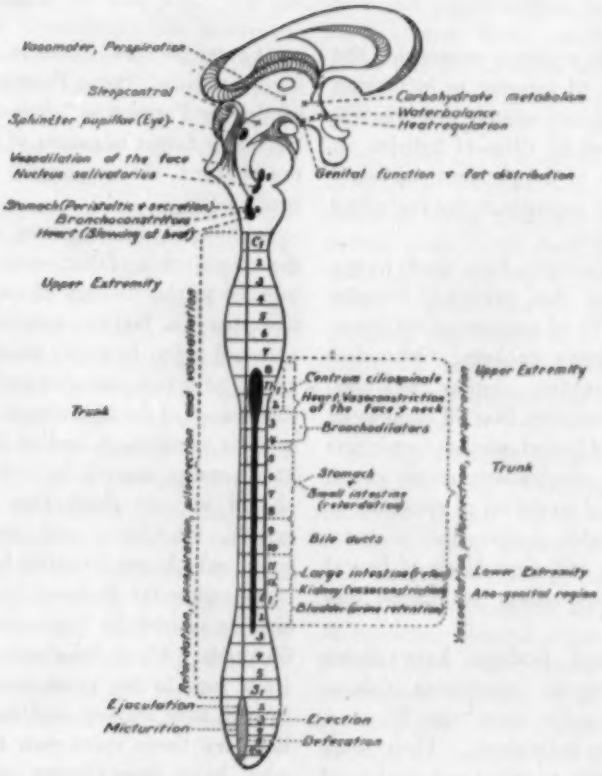

Diagram showing the origin of the sympathetic and parasympa-thetic or sympathet-ic nerves. These nerves may be controlled by the emotions. Peptic ulcer, angina pectoris, essential hypertension, ulcerative colitis, neurodermatitis, some allergic type diseases (some cases of asthma, migraine) and many others are examples of diseases which are thought to have a component of "nervous" origin.

Smoking and the Doctor

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The scientific evidence concerning the harmful effect of tobacco is increasing rapidly. A library search in mid-1952 revealed almost 80 titles of articles on various phases of the problem published in professional journals in the preceding two year period.

Standard textbooks have much to say of interest on this subject. Ormsby states that 95% of cancers of the lower lip occur in heavy smokers. Other dermatologists express similar opinions. Bloodgood concludes that all cancers of the tongue and buccal mucous membrane are caused by simultaneous excessive use of tobacco and irritation of rough teeth. Mills and Porter confirm this in a recent study in 568 men dying of buccal and respiratory cancer in Detroit and Cincinnati.

Wynder and Graham have shown that bronchogenic carcinoma follows heavy smoking for more than 20 years in susceptible individuals. Their work has been widely accepted and confirmed by others workers, including Doll and Hill in England and Ochsner and his coworkers in America. Wynder, who is now associated with the Memorial Cancer Center in New York, in summarizing his article, "Some Practical Aspects of Cancer Prevention," lists tobacco as the major factor in cancer of the larynx, the pharynx, the esophagus, and of the oral cavity.

Additional investigation concerning the relationship of the excessive use of tobacco to the etiology of cancer of the nasopharynx, larynx, esophagus, stomach and colon is sorely needed. If we accept as a fact, as most authorities do, that cancer of the lips, tongue and buccal mucous membrane, and of the bronchi are usually caused by tobacco, why should we not think that cancers of larynx, esophagus and stomach and colon, which are irritated by the same carcinogenic tar dissolved in saliva, may also be caused by it in susceptible individuals. All of the above cancers are from four to ten times more common in men than women, and there are perhaps ten times more men than women who have been heavy smokers for twenty or more years.

Gastric and duodenal ulcers and chronic gastritis are more common among smokers. Bockus and most other

doctors treating these conditions insist that the patient stop smoking in order to expedite healing and prevent recurrence. If excessive smoking can cause gastritis or an ulcer to recur, it seems logical that it can also cause one to form in the first place.

The evidence against tobacco in cardiovascular disease is also very strong. Allen, Barker and Hines in their textbook on "Peripheral Vascular Disease" state in the chapter on arteriosclerosis, "Complete abstinence from tobacco is advisable since tobacco causes arteriolar constriction." They also say, "All patients with thromboangiitis obliterans should abstain completely and permanently from the use of tobacco." They tell their patients with this disease, "If you wish to have your extremities, you must cease tobacco."

Luisada comes to the same conclusion and says in patients with thromboangiitis obliterans "Abstention from tobacco is imperative." He also advises stopping smoking in arteriosclerotic vascular disease. Cecil and Loeb advise against tobacco in Raynaud's disease. Luisada, Green, Levine and many other cardiologists advise against tobacco in patients with angina pectoris. Tobacco is also an important etiologic factor in coronary thrombosis. Every internist in this city advises patients with this disease to stop smoking in order to prevent another attack. Green comes to the same conclusion and says, "In the control and treatment of any type of heart disease, smoking should be absolutely forbidden."

The most recent and authoritative condemnation of smoking appeared in an editorial in the *Journal of the American Medical Association*, November 8, 1952. It says, "The present state of medical knowledge clearly points up the need for investigation of the relation of cigarette smoking to cardiovascular disease. Physicians should pay more attention medically and pharmacologically to a nicotine-containing agent that is used by the public to an equal if not a greater extent than any other drug."

Less serious symptoms such as chronic irritation of the nose and throat and chronic bronchitis; chronic gastritis with heartburn, morning nausea and poor appetite; nervousness and excessive fatigue; and dyspnea on exertion and pseudoangina, are very common among heavy smokers. Almost every day one or more patients come to my office with this syndrome, convinced that they have some serious organic disease. When, after a careful physical and laboratory examination, no organic cause is found, they are often not surprised when I tell them that excessive smoking is the cause of their poor health. Many take my advice to stop smoking, and return in a few weeks to thank me, saying that these symptoms have entirely disappeared and they feel much better.

An important but not generally known fact is that many physicians do not use tobacco. In this city there are at least twenty doctors, who formerly smoked, who have quit; three of them had coronary thrombosis before stopping the use of tobacco. Several others have never smoked and many others smoke very moderately indeed. Many of the remaining admit that smoking is harmful to them, but seem to lack the will power to quit.

A brief case report of four doctors who have discontinued the use of tobacco may be of interest.

Dr. A. Started smoking at 18 and

smoked twenty to twenty-five cigarettes daily until he was 35. He had had rheumatic heart disease in boyhood and thought smoking caused vasospasm. Since stopping smoking he has gained weight, tires less easily and is not so irritable.

Dr. B. started at 28, smoking twenty cigarettes a day for twenty-four years, when he developed hypertrophic gastritis with gastric hemorrhage. The diagnosis was made gastroscopically and he was advised to stop smoking and was given a bland diet. Now he has no more gastric symptoms and eats everything and feels fine.

Dr. C. smoked twenty to thirty cigarettes a day from the age of 17 to 61, when he had a constant cough, substernal pressure and slight pain and vomited his breakfast. He stopped smoking and feels definitely better. He has no cough, no chest discomfort or stomach distress and has gained twenty pounds in weight.

Dr. D. smoked heavily, cigars, pipe and cigarettes from the age of 24 to 35, when he had a severe attack of coronary thrombosis and almost died. He writes, "I had a coronary: a cigar in my most sincere opinion being a prime causative factor." He was advised by his physician to stop using tobacco. He finally recovered from his coronary and is again practicing medicine. He says he no longer has a bad taste and doesn't have periods of weakness.

Perhaps one reason that these twenty doctors have stopped smoking is that they have seen many of their medical friends die prematurely of cardiovascular diseases. Mortality records of physicians in this city show that fifty-seven have died in the last twenty years. Thirty seven, or 68% of these have died of arteriosclerotic cardiovascular diseases, chiefly coronary thrombosis. Most of these men were heavy smokers and half of them died in their forties and fifties, too early for significant senile changes. This confirms the investigations of Doll and Hill, that in the greater London area, among men of ages 45 to 64, the death rate in non-smokers is negligible, while in heavy smokers it is estimated to reach three to five deaths per annum per 1,000 living.

Comment — Two important facts about the harmful effects of tobacco should be emphasized. First, that the minor effects such as nose and throat irritation, bronchitis, chronic gastric irritation and pseudoangina may come on rather soon after forming the habit, and are soon relieved after stopping it.

The more serious results of tobacco, such as cancer of the lip, tongue, cheek, larynx and of the lung and perhaps of the esophagus, stomach and colon arise only after many years of excessive use of tobacco, and are not relieved by abstinence. The same is true of the vascular changes, such as coronary thrombosis and peripheral arteriosclerosis. Angina pectoris and thromboangiitis obliterans, on the other hand, are apparently often helped by abstinence.

Conclusions

1. There is general agreement that the excessive use of tobacco may cause, in susceptible cases, cancer of the lip, tongue, buccal mucous membrances and bronchi. There is evidence that cancer of the

nasopharynx, larynx, esophagus, stomach and colon may also be caused by prolonged excessive use of tobacco.

2. Cardiologists and internists agree that the excessive use of tobacco can cause angina pectoris, coronary thrombosis, thromboangiitis obliterans, and peripheral endarteritis.

3. Investigation has disclosed the fact that twenty doctors in Evansville, Indiana have stopped smoking entirely, and many others have never smoked, or smoke very moderately.

4. Analysis of the causes of death of physicians in Evansville for the past twenty years indicates that tobacco may have been an important etiological factor in at least a third of the deaths.

5. There is great need for further investigation to verify the above conclusions in larger groups.

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Rheumatoid Arthritis

Indications for the Use of Cortisone

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In a previous report[1], various methods of administration of cortisone in the treatment of rheumatic diseases were discussed. At that time it was pointed out that of the many methods of adminstration there were several of practical value:

1. Prolonged continuous administration
2. Slow withdrawal
3. Combinations with gold
4. Intra-articular administration

As yet the long-range benefits of cortisone are still unsolved. However, certain factors seem apparent. (1) The drug under adequate supervision is relatively safe. (2) Prolonged use has not produced any serious permanent systemic damage. (3) The cost of maintained use has now reached a level within the scope of the average person. (4) Complicated laboratory procedures are not necessary in following the progress of treatment.

These factors now place the use of cortisone within the realm of a therapeutic agent of practical value. However, the clinical results are not completely satisfactory. It is the purpose of this report to categorize the various rheumatoid diseases where definite indications for the use of cortisone exist, and, of more import where permanent clinical results are achieved either in the form of a cure or the maintenance of life and function (see Table 1).

Since the introduction of cortisone its major use has been in this disease. Unfortunately to date the results in this condition have not been universally proportional to the widespread use of the drug. From the practical standpoint, cortisone is not generally indicated in the ordinary case of rheumatoid arthritis. This is borne out by the temporary effects of the drug and the lack of permanent lasting relief. Therefore the drug should be reserved for specific phases of the rheumatoid state or for certain combinations with other drugs such as gold.

Table 1

INDICATIONS FOR CORTISONE THERAPY

A. Rapid Fulminating Type
B. Correction of Deformities
C. Psoriatic Arthritis
D. Rheumatoid Mutilans
E. Arthritis Mutilans
F. Palindromic Rheumatism
G. Still's Disease (Juvenile Rheumatoid Arthritis)
H. Complications of Disease
   1. Iritis and Episcleritis
   2. Gold Dermatitis

In the usual case of rheumatoid arthritis, the most useful therapy consists of general measures including gold therapy which probably gives the highest rate of remissions on a long-term basis.

The method of combining gold and cortisone therapy has been described before and will be reported in detail at a later date. Here the temporary use of cortisone and the theoretical remissions produced by gold form a therapeutic combination which is ideal. This is still in an unsettled state but appears to hold promise. If this method is borne out, it will serve as an exception to the rule regarding the general use of cortisone in rheumatoid arthritis.

Another exception may be found in the prolonged, continuous administration of cortisone. After several years the therapeutic efficacy of this method is still unsettled. If experiencs teaches that the drug may be continued indefinitely with lasting remissions and without permanent side effects, then our problem is solved.

Thus this method could be used indefinitely and other forms of therapy discarded. This is still conjectural and does not seem likely. Therefore, it is still necessary to use cortisone discriminately with specific indications as shown by more and more experience with the drug.

The conditions below fall into these categories and are discussed along the above lines.

A. Rapid Fulminating Type

In a small percentage of cases of rheumatoid arthritis, the disease is so marked and the course so rapid that there is danger to life and the risk of severe rapid crippling. Here, cortisone is indicated as soon as feasible in order to prevent the serious consequences of the disease. This may be continued either on a long-range basis indefinitely or as a combined therapy with gold until the serious phase is overcome.

B. Prevention of Deformities

Early Deformities In the mild or early rheumatoid arthritis, the sudden onset of a deformity is not uncommon. These occur frequently in joints such as the elbow and knees. Here a short course of cortisone, usually at a lower dosage level, is sufficient to reverse the process. Then proper splinting and physio-therapy can overcome the deformity. Thus only a short course of cortisone is necessary to overcome the deformity.

Late Deformities In general, cortisone will not correct the pronounced and fixed deformities of advanced rheumatoid disease. However, it is useful in combinations with other measures aimed at correction of contractures with physical medical measures on a long range basis. Also it is useful prior to surgical manipulation since it will minimize much spasm and contractures at the time of operation. Following surgery, the cortisone is kept up for a short period until healing is complete and active motions are maintained.

C. Psoriasis

Both the psoriatic arthropathy and psoriasis with rheumatoid arthritis show very encouraging results with cortisone therapy. The arthritis is more favorably affected than the psoriasis which shows only transitory improvement combined with gold therapy. My results are good and many retained remissions have been achieved even as long as two years following the onset of therapy.

D. Rheumatoid Spondylitis

To date the best form of therapy is radiation therapy. This produces the greatest relief of pain with cessation of the process. However, many cases due to lack of therapy develop deformities associated with rigid so-called bamboo spine. In these burned-out late cases, one is often surprised by the increased chest expansion and spinal flexion after cortisone therapy. One such case treated twelve years after the disease process became quiescent showed an increased chest expansion of two inches and increased back flexion of four inches. This occurred after three weeks therapy and has remained that way one year after medication was stopped. Even in acute severe cases, cortisone should be combined with x-ray therapy to produce a quick palliation of the acquiring symptoms. When radiation becomes effective then cortisone is gradually withdrawn allowing a maintained improvement. In the usual milder form, radiation alone is effective and cortisone unnecessary.

E. Arthritis Mutilans
(Opera-Glass Hand)

This condition manifests itself as a variant of rheumatoid arthritis. The chief manifestation is a destructive absorptive form of arthritis affecting the phalanges of both hands and feet. This results in telescoping of the bones with fragmentation. The fingers are shortened with wrinkled redundant skin. This results in complete ankylosis of the small joints of the feet and hands, is particularly serious since the resultant ankylosis leaves markedly painful and useless extremities. Cortisone is indicated as soon as the diagnosis is made even if the condition appears mild. This combined with gold therapy gives the best chance of either stopping the process or minimizing the destructive joint changes. In two treated cases, the process was completely arrested and the improvement maintained for many months.

F. Palindromic Rheumatism

This vague and rare condition is still questionably related to rheumatoid arthritis as one of its unusual variants. Nevertheless the condition usually produces no permanent joint changes but may be clinically severe. The attacks may be frequent and disabling because of marked symptoms unresponsive to ordinary methods of therapy. In this instance cortisone has been reported as beneficial in relieving the severe symptoms.

G. Juvenile Rheumatoid Arthritis
(Still's Disease)

The juvenile rheumatoid arthritic falls in the same category as the adult with one great exception. In the preadolescent stage, the rheumatoid process frequently affects the epiphyseal centers. This leads to one of the gravest complications: shortening of extremities due to interference with growth.

The same qualifications for the use of cortisone in adults also apply here. However, it is particularly urgent to institute cortisone therapy where there is a lack of response to ordinary therapy or where interference with growth is already manifest. In this case cortisone should be used on a long-range basis. In the case of deformities, cortisone is also effective both in the early and late stages as described above.

H. Complications of Rheumatoid Arthritis

1. Eye Involvement General types of

inflammatory eye changes occur during the course of rheumatoid arthritis. These include iritis, episcleritis, iridocyclitis, etc. They are not very common but the course is usually prolonged and very resistant to treatment. Cortisone both locally and systemically has been beneficial in relieving what has been otherwise a very resistant condition.

2. Gold Dermatitis Skin rashes occur during the course of gold therapy in variable degrees in five to ten per cent of the cases. Most are of a mild nature and respond to cessation of gold therapy. However, in rare instances, the therapy is complicated by a serious and marked exfoliative dermatitis. This may be prolonged and possibly of a serious prognostic nature. It has been treated by BAL with reported good results. However, cortisone therapy is also beneficial and a simpler form of therapy. The results are encouraging and may be life-saving. Therapy should be instituted as soon as the diagnosis is made and continued for a prolonged period of time.

Summary

1. Cortisone is a useful therapeutic agent in the treatment of Rheumatoid Arthritis when used with definite indications.

2. The drug is useful in certain limited rheumatoid states or where life and function are markedly impaired.

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Clinico-Pathological Conferences

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Patient A. M.

First Bellevue Hospital admission of a 38-year-old Negro male, married. Admitted 7/13/53.

C.C. "Pain and ulceration of chest and back — 18 months." Patient admitted to Dermatology and Surgical Services.

P.I. 18 months prior to admission, the patient noted a "pimple" on the right buttock which he treated with cod liver oil ointment. The "pimple" broke down and ulcerated and over the period until admission, the ulceration increased in extent and finally involved the entire right side from the scapula down to the buttocks. Various ointments and antibiotics such as Furacin Ointment, Penicillin parenterally, Aureomycin Ointment and Capsules were used in large and prolonged dosage at other hospitals and clinics without success.

In the period prior to admission, the patient had been told of "increasing yellowness" of the skin and had noted a swelling of the penis in the week p.t.a. The ulcer area and low back were exceedingly painful.

P.H. A pimple of the left lower abdomen was treated by the patient adequately with ointments 3 years p.t.a.

There is no recorded system review, other past history or family history on the chart.

Physical Examination T 101.6. P 90. B. P. 104/60.

Skin Generalized Ichthyosis. A deep, phagedenic ulceration covering the right and lower aspect of the chest and buttock. A putrid smelling, purulent exudate, yellow in color, is covering the entire ulcer base. Portions of the ulcer show evidence of old scarring as do portions of the left lower abdomen.

Penis—Marked swelling.

Head—Lipomatous swelling on the left, frontal region.

Neck—Negative.

Remainder of physical examination noted as negative.

Hospital Course—The patient was transferred to Surgery on 7/14 with a diagnosis of pyoderma gangrenosum and cong. ichthyosis with the intent of debridement and skin grafting of the ulceration. Temperature continued to spike daily throughout hospital stay in spite of Penicillin, Terramycin, Chloromycetin and Streptomycin.

7/14—Surgical Note—An ulcer, 18" x 12" with much necrotic tissue. Pa-

tient has a swollen right leg and swelling of the penis. Temperature 102 R.

7/16—Debridement of a "Meleney" ulcer. 500 cc. Whole Blood given. During surgery, much thickened, "collagenous," granulomatous tissue was excised. Pressure dressing applied.

7/23—T° 102.5 R. B. Proteus Cultured from ulcer area. Bacitracin ointment applied. Pain improved.

7/27—Skin Graft-Area from 11th rib to upper sacrum to depth of 1″ covered with split thickness graft. Taken from left thigh. Pressure dressings.

7/31—90% of graft viable-pain marked.

8/3—40% of graft now viable. More necrosis of tissue surrounding graft.

8/4—Patient complained of severe pain in the back this A.M. Later found unresponsive and dead. T° 96°—2 hours before death.

Laboratory data

Biopsy Report from tissue debrided at surgery 7/16.

Macroscopic — firm tissue, white with shaggy surface.

Microscopic — *A* — necrotic connective tissue with squamous epithelial covering; plasma cells, lymphocytes and mononuclear cells seen. *B* — Another section with large areas of granulation tissue. Large areas of necrosis with neutrophils. Elsewhere, many plasma cells, mononuclears and eosinophiles. Occasional large mononuclear cells with large hyperchromatic nuclei seen. No acid fast bacilli—a few gm. + cocci seen. *Diagnosis:* Necrosis of tissue with acute and chronic inflammation.

7/14—Urinalysis P.H. 5.5. Alb. Neg. Sugar neg. Micro-Moderate number bacteria.

7/15—CBC. Hb. 13.0. RBC 4.3. Diff. Tr. 83, P 2, Lymphs 17, M 2, E 1.

7/31—Hb. 14, RBC 4.

7/21—Sugar 64 mgm%. Protein A/G 2.47/2.98. BUN 8.4 MGMS %. Thymol Turbidity 0.5 units. Mazzini—negative.

Cultures from ulcer and pus—1. B. pyocyaneus, 2. Enterococci and, 3. B. Proteus. #1—Sensitive to Chloromycetin, #2—Resistant to all agents, #3—Sensitive to Polymyxin.

Pathological Findings

Autopsy revealed tumor masses in lymph nodes throughout the body, in the diaphragm, and in the right lung. Histologically. the tumor proved to consist of many atypical giant cells resembling Reed-Sternberg cells, lymphocytes, plasma cells, eosinophils, and areas of fibrosis. Somewhat similar groups of cells were found in hepatic sinusoids. Sections taken from the ulcer of the back revealed the subcutaneous tissue to be infiltrated by the same type of neoplastic tissue. In the gross, firm tissue in the floor of the ulcer extended to the posterior peritoneum.

Because of the exceedingly numerous bizarre giant cells, this patient's disease might have been classified either as reticulum cell sarcoma or as *Hodgkin's Disease*. The latter diagnosis was selected because of the granulomatous picture (including a variety of inflammatory cells) found even in areas, like para-aortic lymph nodes, which might have been expected to be free of inflammation.

A review of the biopsy sections revealed, in one of them, tissue which was indistinguishable from the patient's tumor. In retrospect it was evident that the patient's intractable ulcer resulted from spread of his Hodgkin's disease probably from a mass of retroperitoneal lymph nodes. The fact, that, except for

the presence of bizarre giant cells, the tumor was indistinguishable from chronic inflammatory and granulation tissue accounted for the failure to make the diagnosis when the biopsy was first examined. The necrosis and repair secondary to the ulceration further confused the picture.

Case presented from the wards of the Fourth Medical Division, Bellevue Hospital, Dr. Charles Wilkinson, Dir.

Patient R. T.

1st B. H. Adm. 61 yr., single, white male, machine lathe operator c a. C.C. "Pains in the stomach for three weeks" Admitted 7/7/53. No previous hospitalization.

P.I.

1 year. p.t.a.—Attacks of dull, aching, mid-epigastric pain lasting 10-20 minutes each time, non-radiating, without relation to food, activity or position. No increase in intensity.

4 months p.t.a.—No desire for food and lost some 20 lbs in weight until admission.

3 months p.t.a.—Attacks of sharp peri-umbilical pain shooting in character, lasting three to five minutes and unrelated to food, activity or position. Oftentimes, pain awakened him from sleep. Necessary to take cathartics to move bowels. Scanty movements.

3 weeks p.t.a.—Symptoms increased in intensity and patient left work, went to bed until referral into Bellevue by private physician.

Progressive constipation noted until day of admission. Much belching of foul-tasting gasses in recent weeks. Some swelling of abdomen noted in recent weeks.

F. H. Unknown

Social.—Travelled all over the world as a merchant seaman, has worked as a coal miner and in steel mills. Smoked 2/3 pkgs. cigarettes/day for forty years. Four to five years prior to admission was drinking heavily but always ate well; ? quantity of Whiskey. Lived in a boarding house.

P.H.U.C.H.D.—Scarlet Fever at the age of 21. In bed for one month. Typhoid Fever at age 18. In bed one month. No sequelae to either illness.

R.O.S. — Recent headaches, self-limited. Hearing loss on left. C.R. Negative. G.U. Nocturia 3-4x for 3 months. No associated symptomatology. N.M. Evening ankle edema.

Physical Examination T.—100.2, R.—22. B.P.—160/100.

W.D. Chronically ill white male with evidence of weight loss but in no acute distress.

Skin and Mucosa—Face and arms are tanned. Mucosa pale. No angiomata seen. Hair normal male distribution.

Head E.E.N.T.—Pupils react to L and A. EOM intact. Sclerae clear, Funduscopic inadequate. Tongue well papillated, but pale. Teeth in poor repair.

Glands—A few shotty posterior cervical nodes on the left. Bilateral shotty inguinal nodes, movable.

Chest—Increased A. P. Diameter.

Lungs—Dullness in left base with decreased breath sounds.

Heart—P.M.I. in 5 i.c.s., no changes to percussion. Heart sounds of good quality. A2-P2 equal. Soft apical systolic murmur.

Abdomen—Tense with flaring flanks.

Shifting dullness and fluid wave. Questionably ballotable mass in the right upper quadrant part of the abdomen with tenderness in this area. Tenderness in the left lower quadrant. Peristalsis diminished but present.

Trunk—No sacral edema.

Genitalia—Normal male.

Rectal—Skin tags present. Internal hemorrhoids present. Prostate neg. Question of a rectal shelf felt beyond the examining finger in the rectal pouch of the peritoneum.

Neurological—Physiological.

Genitalia—Normal male testes.

Extremities—No cyanosis or clubbing.

Hospital Course Fluoroscopy of the chest was normal. The patient received high protein dietary supplements and injections of mercurials but his abdomen remained distended. Paracentesis on 7/16 revealed 6,000 cc. of light yellow, somewhat turbid fluid. Immediate smear showed very few polymorphonuclears. After the paracentesis, a firm, nodular liver was felt in the right upper quadrant four finger-breadths below the costal margin.

The abdomen refilled rapidly and a second paracentesis on 7/31 revealed 5225 cc. of yellow fluid. He required codeine for relief of abdominal pain. Fecal impaction was present on 7/26 and was relieved without change in symptomatology. Patient became weaker and cachectic and gradually slipped away on 8/8/53.

Laboratory Data Urine—7/10 Color Straw SG 1.024, ph acid, Albumen Negative Sugar 1 plus. 3-4 WBc in HPF of urine.

7/8 Hb.—16.5, RBC—15.3, P—72, Tr.—11, L—12, M—4, E—1, ESR—20, HCt—53.

7/14 Hb—16.0, RBC—5.2, WBC—8.3, P—76, Tr.—8, L—12, M—3, E—1, ESR—32, Hct—49.

7/13 Prothrombin Time—13 seconds. Normal 14 seconds.

7/8 NPN—29 mgms %.

7/22 A.G.—4.9/2/3 Cholesterols—115 mgms %, II 15 Ceph. Flocc. Neg. Alk/Phosph. 6.2 B.U. Phosphorus 3.9 mgms %, Van Den Bergh Direct-Absolute.

Mazzini—Negative.

Stools with guaiac—7/7, 7/10, 7/29—Negative.

X-rays — Abdomen. — 7/12 Ground glass haze suggestive of fluid. No evidence of intestinal obstruction. Renal vascular calcifications seen.

Chest and Colon 7/12 Negative. Cecum may have abnormal markings and repeat study requested but this was not done.

G.I. #1 — Performed but not reported.

Pathological Findings

At autopsy the patient's sclerae were found to be icteric. The peritoneal cavity contained 3,000 cc. of clear fluid. The liver was only slightly increased in size (it weighed 1850 grams), but almost the entire left lobe was replaced by a firm tumor mass. Only a few small tumor nodules, around hepatic veins, were found in the right lobe. This is the characteristic appearance of primary *carcinoma of the liver*, in contrast to metastatic carcinoma in the liver, in which one finds multiple small tumor nodules uniformly distributed

throughout the organ. Metastatic tumor studded this patient's peritoneum, mesentery, omentum, and peritoneal lymph nodes. The omentum was matted against the stomach and transverse colon, accounting in part for the patient's gastro-intestinal symptoms. It is most unusual for hepatic carcinomas to metastasize widely within the peritoneal cavity (1). Histologically, the tumor was a mixture of the two common varieties of liver carcinoma, the hepatic cell and bile duct types. There was no associated hepatic cirrhosis. While carcinoma of the liver is about 30 times as frequent in cirrhotics as in the rest of the population 75% of the cases of bile-duct type carcinoma, and 10% of those with hepatic cell type occur in patients without cirrhosis (2, 3, 4).

Severe atherosclerosis and narrowing of the coronary arteries was found, but they were not occluded anywhere. There were many large areas of hemorrhage in the myocardium of both ventricles; there was also some endocardial hemorrhage. No necrosis was found in the myocardium. While hemorrhage is frequently the earliest sign of myocardial infarction, it is unlikely that were such wide-spread myocardial hemorrhage a manifestation of anoxia, no necrosis would be found. An area of hemorrhage was also found in the descending colon. The most obvious explanation of the hemorrhages is that the patient had a bleeding tendency secondary to hepatic damage. The single prothrombin time recorded was normal, but this was done about 4 weeks before the patient died, at a time when he was not clinically jaundiced.

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Case presented from the wards of the Fourth Medical Division, Bellevue Hospital, Dr. Charles Wilkinson, Dir.

Stenosing Tenosynovitis

As the name implies, stenosing tenosynovitis is a constriction of a tendon sheath which interferes with the gliding of the enclosed tendon. It is almost always seen in the hand, only rarely in the foot. Misdiagnosis when the patient is first seen is the rule rather than the exception. For this reason a presentation of the features of this not-uncommon condition is in order, to make the physician who first sees the patient "stenosing tenosynovitis-conscious."

DeQuervain in 1895 was the first to recognize the disease, involving the tendons over the radial styloid. Winterstein (1927), Finkelstein (1930), and Bunnell (1948) added cases to the literature, and Lapidus and Fenton (1952) and Lapidus (1953) have published excellent discussions of the subject.

Sites The three locations of this condition are (a) the sheaths enclosing the tendons of the abductor pollicis longus and extensor pollicis brevis (Figure 2), (b) the sheath of the flexor pollicis longus (Figure 3), and (c) the sheaths of the flexor sublimus and profundus tendons to each of the four lesser fingers (Figure 3).

Anatomy A tendon is a smooth, inelastic, non-contractile fibrous cord which transmits the power of a contractile muscle, and produces motion of one bone against another at the joint between them. When a muscle contracts, the tendon is pulled in a straight line. To produce motion, it must cross at least one joint. To function properly, the tendon must be prevented from slipping over the bony prominence or from separating from the joint in flexion (like a "bowstring"). This is accomplished by an annular ligament or tendinous retinaculum acting as a pulley through which the tendon glides. Friction at the tendinous bend must also be minimized. This is accomplished in many cases by a lubricated sheath surrounding the tendon. These arrangements are found mainly at the ankles and wrists, and in the digits.

(a) At the wrist there are six compartments for tendon sheaths on the dorsal surface and three on the ventral surface, all under the circular annular ligament (Figures 2 and 3). Each pair of flexor tendons in the digits has a tendon sheath also (Figure 3). Only a few of the sheaths are ever involved in stenosing tenosynovitis, for reasons that will be apparent. (a) The tendon sheaths of the abductor pollicis longus and extensor pollicis brevis are together in one tight channel (Figure 2), formed

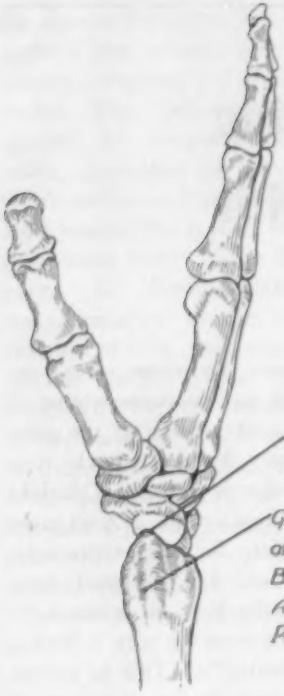


Fig. 1 Lateral view of bones of wrist and hand.

Fig. 2

Dorsal surface of the hand. Solid dot (•) indicates site of pain and tenderness in DeQuervain's disease.

by a bony groove over the radial styloid (Figure 1) and the tough annular ligament. The tendons are markedly angulated when the hand is deviated ulnarward. The angulation is greater in the female than in the male, a likely reason for the greater prevalence of DeQuervain's Disease in women. In some cases, the abductor pollicis longus has been found to have from two to five tendons instead of one, thus reducing the space for gliding within the sheath.

(b) At the level of the first metacarpal neck the tendon of the flexor pollicis longus runs through a narrow channel, formed by a groove in the palmar surface of the first metacarpal and the transverse fibers of the strong ligamentum vaginale digiti. Two sesamoid bones are present in the capsule of the first metacarpal joint and further narrow the sheath at this point (Figure 3).

(c) Each pair of tendons of the flexor sublimus and profundus to each of the four lesser fingers enter a narrow osteo-fibrous tunnel at the region of the metacarpal neck, formed by a groove in the palmar surface of the metacarpal, and the ligamentum vaginale digiti (Figure 3).

Symptoms and Signs (a) Stenosing tenosynovitis of the abductor pollicis longus and extensor pollicis brevis (DeQuervain's Disease): The patient complains of pain over the radial aspect of the wrist and thumb, and radiating up the forearm. The pain is increased by motion, especially ulnar deviation of the hand. The grip may be weakened. On examination, there is a slight prominence over the radial styloid and tenderness at this point. Snapping and locking have never been observed in DeQuervain's Disease. The lesion is practically always unilateral.

(b) Stenosing tenosynovitis of the flexor pollicis longus: This is the only location where the disease is found in infants as well as in adults. In infants, the thumb is held flexed and cannot be fully hyperabducted passively. There is snapping and locking of the thumb, and on examination, tenderness and thickening are found in the mid-line on the palmar surface of the first metacarpal-phalangeal joint at the region of the two sesamoids. In adults the symptoms and signs are about the same, but in addition, the patient usually states that the symptoms are most marked after a night's rest, the tendon gradually limbering up during the day.

(c) Stenosing tenosynovitis of the finger flexors: (Trigger-Finger): The patient complains of pain and snapping over a metacarpal-phalangeal joint. There is tenderness localized in the mid-line on the palmar surface of the MP joint of the involved finger, and a firm swelling may be found in this area.

Differential Diagnosis The differential diagnosis is simple if the disease is kept in mind. Acute tenosynovitis, tuberculous tenosynovitis, chronic non-specific tenosynovitis, osteal and periosteal inflammation, tumors, and localized lesions of peripheral nerves can theoretically be confused with stenosing tenosynovitis, but in practice present no real problem. Infectious and osteo-arthritis should be considered, but can be distinguished by the fact that they often involve multiple joints, and are manifested by pain with both flexion and extension; generalized joint tenderness instead of localized tenderness; and absence of snapping and locking. Of course, arthritis can coexist with stenosing tenosynovitis. A careful history

and physical examination, neurological examination, and x-rays are always advisable.

Etiology Seventy-five percent of the cases of this disease occur in females, and the right hand is involved twice as frequently as the left. Most patients are middle-aged; only the flexor pollicis longus is involved in infants. In most cases there is no definite history of acute trauma. However, chronic trauma, that is, oft-repeated irritation of the tendon sheath by rubbing it back and forth over the bone, is undoubtedly the major etiological factor. Typing, sewing, knitting, washing and wringing clothes, playing the piano, etc., are activities that may produce this chronic irritation.

Pathology There is marked thickening of the tendon sheath, often forming an hour-glass constriction at the point of "squeeze." There may be a bulbous enlargement of the tendon on either side of the constriction. An excessive amount of synovial fluid is often found within the sheath. Spiderweb adhesions are commonly seen between the

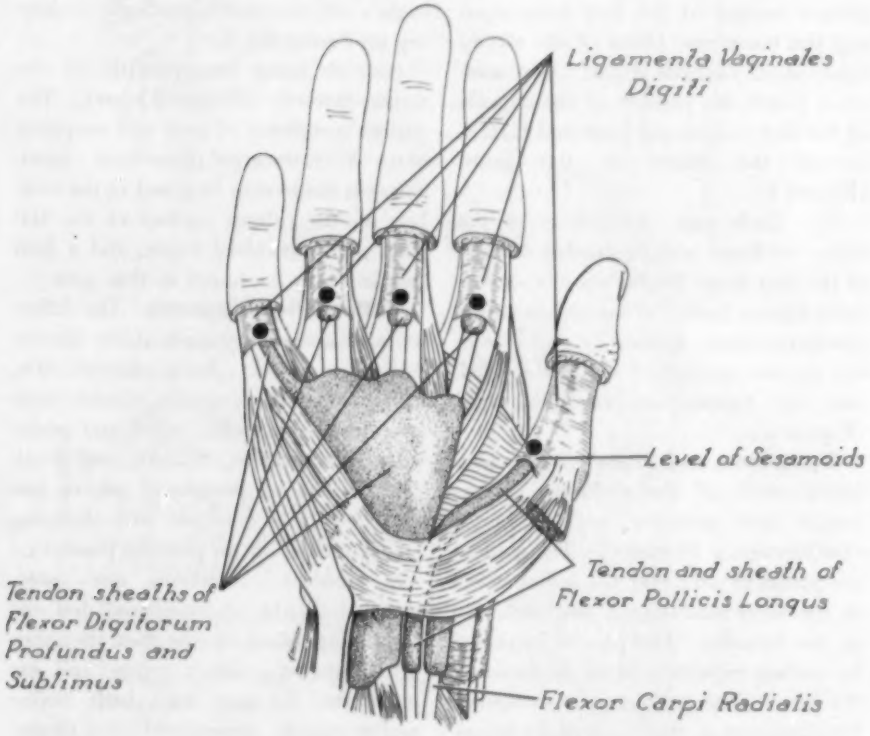
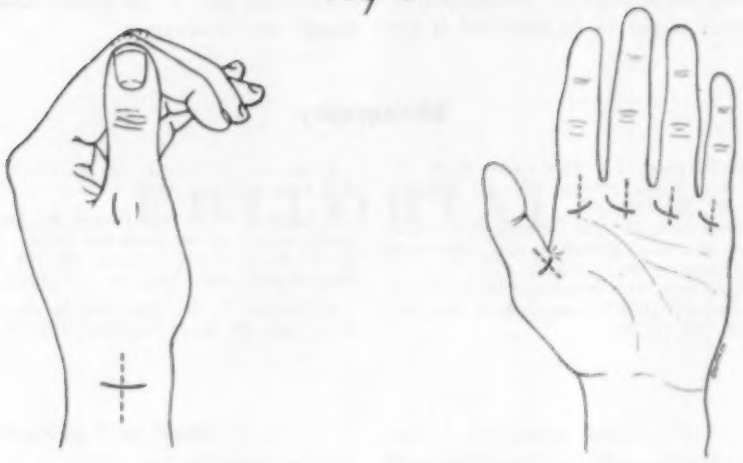


Fig. 3

Palmar surface of the hand. Solid dots (•) indicate sites of pain and tenderness in stenosing tenosynovitis of flexor pollicis longus and of flexors of the four lesser fingers.

Fig. 4



Skin incisions (solid lines).
Incisions in tendon sheaths (broken lines)

Locations of incisions in the palm and at the wrist.

tendon and the sheath, but no fibrous adhesions have been observed.

Treatment Spontaneous recovery has occurred in some patients, but in most cases the symptoms persist for years without treatment. For patients who have had symptoms less than six weeks, conservative therapy may be tried first. This consists of immobilization of the hand and involved finger in an unpadded plaster cast for four to five weeks. The cast should extend from just below the elbow to the distal palmar crease and include the involved thumb or finger, maintaining the wrist in dorsiflexion and the involved digit in the position of function.

If the symptoms are not gone after the cast is removed, or if the symptoms have been present for more than six weeks when the patient is first seen, operation is indicated. This may be done in ambulatory patients, but must be carried out under the strictest aseptic conditions, preferably in the hospital operating room. Local procaine block anesthesia is sufficient in adults; general anesthesia is necessary in infants. Incision is made over the area of tenderness, in line with the skin creases, and shown in Figure 4. The tendon sheath is then exposed and is divided longitudinally, care being taken not to injure the enclosed tendon. (Figure 4). Only the skin is sutured, and a small dry dressing is applied to allow for immediate mobilization of the finger and wrist, which prevents reformation of the constriction. Sutures are removed in a week. Under no circumstances should a longitudinal skin incision be used over the radial styloid, for this results in a

scar adherent to the tendon, and markedly limits motion. Recurrence of symptoms is not to be expected if the sheath has been adequately opened. Excision of part of the tendon sheath is usually not necessary.

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Antimalarials Clear Light-Sensitive Eruptions

Various light-sensitive eruptions continuing as long as 20 years in some cases were completely cleared, or patients showed dramatic improvement, after treatment with the antimalarial drugs Aralen or Atabrine, according to Knox, Lamb, Shelmire and Morgan in the *Journal of Investigative Dermatology* [*22*:11(1954)].

According to the authors the results of the use of these drugs have been very encouraging, with no failures as yet.

Observing that Aralen may be the drug of choice in light-sensitive dermatitis and lupus erythematosus, they single out one of the 18 cases treated with Atabrine for special mention. The patient had been on continuous hormone therapy, plus application of a light-screening ointment, for 19 months for severe plaque-like eruptions. While this regimen produced on only 30 per cent improvement, there was 90 per cent clearing with Atabrine in a period of five months.

The authors state that previous methods of treatment, although often beneficial, were relatively unsatisfactory. Many patients became discouraged because of the expense of treatment and because of the slowness of improvement, they write.

Response to Aralen or Atabrine was quicker and successful in a higher percentage of cases, and no reactions were noted in the study, according to the article.

EDITORIALS

Propitiating Our Gods

The toll in life and property of motor vehicle accidents is increasing and in the words of Robert W. Osborn, speaking at the annual spring conference of the State Charities Aid Association, meeting in Albany, New York, on April 23rd, "traffic accidents are a sickness in our nation, a plague upon our streets and highways."

The human sacrifice involved—traffic deaths in 1953 totaled 38,500 — seems to be the analogue in our culture of the human sacrifice practiced by the Aztecs to propitiate their gods. The difference is mainly in terms of the vastly greater and bloodier scale upon which we practice our sacrifices.

Obviously, we have our own pagan gods, as horrendous as any ever worshipped by the Aztecs.

The Founder of Bellevue Hospital

The medical school of Kings College, New York, was established in 1767 and became the Medical Faculty of Columbia College in 1792. In the earlier period John Jones and Samuel Bard were the chief figures; in the Columbia College period the same Samuel Bard, David Hosack, Valentine Mott, Wright Post, Samuel Latham Mitchill and John W. Francis were the outstanding men.

"In planning their activities," says Dr. Grayson Kirk, president of Columbia University, "universities must think in terms of generations rather than years . . . Columbia now looks to the third century." Dr. Kirk was discussing the university's bicentennial celebration theme of "Man's right to knowledge and the free use thereof."

Looking back to the century preceding that of Kings College we find the worthy medical progenitor of the pioneers named in our first paragraph—Jacob Hendrichsen Varvanger. He began practice in New Amsterdam about 1649. The Council had already passed an ordinance regulating the practice of medicine, in response to a petition of the Chirurgeons of New Amsterdam, and had empowered Dr. Johannes La Montagne, a learned Huguenot, graduate of Leyden, who had arrived in 1637, to put the ordinance into effect. Varvanger, Schult, Kierstede and L'Orange were qualified under this ordinance. Var-

vanger became the official medical officer of the Dutch West India Company, which controlled the affairs of the New Netherlands settlement, following Schult and Kierstede in that office.

Varvanger was a progressive and conscientious man and pointed out to the Director and Council, in 1658, that his ministrations to the sick soldiers and other employees of the company were counteracted by reason of the fact that they were improperly housed and cared for. He advised the establishment of a hospital. Such a hospital was thereupon started in December of the same year—the embryonic Bellevue.

One likes to think that Varvanger's farsightedness encompassed a dream of the mighty Bellevue of later centuries. with its vast community service and great company of distinguished medical men trained in its wards.

Plight of Our Medical Schools

If the nation's medical schools are to continue functioning one hundred per cent in their vitally important role of sustaining this country's high degree of healthfulness, they must be financially supported by industry, since great fortunes can no longer be looked to as sources of income. For the continued achievements of our great industries depend absolutely upon the good health of their working personnel in all ranks. The good medicine required calls for good medical schools. The equation involved is a simple one—good medical schools plus consequent good medicine = industrial health. Industry's stake takes priority and industrial medicine takes a high place in the changing pattern of our lives.

Professor Berry of the Harvard Medical School has best expressed the above principles. He points out that the school's programs designed to meet requirements cannot be put into effect because income does not keep pace with expense. It has taken fifty years to develop these programs; even the teaching staffs are still "shockingly underpaid."

Dr. Berry warns that endowment income has dropped to below 50 per cent in the budgets of medical schools, and tuitions pay less than 20 per cent of a student's medical education. Raising tuition to meet the deficit, he declares, would make medical education so expensive that virtually no student could afford it.

Sun Worshippers Take Care!

Some investigators (*J.A.M.A.* 154:-244, 1954) have ascribed the development of cataract to the effect of the ultraviolet rays of sunlight; this certainly seems to be the case in cataractous people who have been much exposed to intense sunlight.

What will be the reaction of our overenthusiastic sun worshippers to the bad news? Such worship is definitely a part of our culture.

Sunburn is a minor matter compared to the slow and insidious lens damage which seems to result from frequently repeated exposures.

Study of the nudists' colonies ought to provide some interesting research data. Dim vision would surely deprive the nudist of his *raison d'etre*.

Since the effect of ultraviolet rays on the lens is due to a photochemical reaction in the lens proteins it is by no means certain that dark glasses are much of a protection, so far as cataract development is concerned.

Apparently the infrared rays of sunlight play no part in cataract formation.

UROLOGY

AUGUSTUS L. HARRIS, M.D., F.A.C.S*

Genito-Urinary Tract Infection, Prostatic Calculi and Carcinoma of the Prostate

A. L. Finkle *(Journal of Urology,* 71:67, Jan. 1954) reports a study of the clinical records of 361 cases of prostatic calculi admitted to the Brady Urological Institute of Johns Hopkins Hospital in a forty-six year period to June 30, 1950. In 141 of these cases histological examination of prostatic tissue was made; and in 20 of these cases adenocarcinoma was found, which had not been clinically diagnosed. The majority of the patients with prostatic calculi were in the sixth decade of life, and the majority of those with calculi and carcinoma were in the seventh decade of life. While there was a history of urinary tract infection in the records of 258 cases, the date of onset of the infection and the time of the formation of the prostatic calculi could not be accurately determined from most of these records. In 22 cases, however, the records showed that the formation of calculi preceded infection in 8 cases and followed infection in 12 cases, and occurred at about the same time as the infection in one case; in one case there was no infection associated with the calculi. The histories showed gonorrheal infection in youth in 50 per cent of the 361 cases of prostatic calculi, and in 30 per cent of those with both calculi and cancer. As this is a much higher incidence of gonorrheal infection than is found in the general population of the United States, this finding suggests that gonorrheal infection may in some way predispose to the formation of prostatic calculi in later life. As this study shows that prostatic cancer may be associated with prostatic calculi and may not be diagnosed correctly by clinical examination, and since open perineal dissection and biopsy of the posterior capsule of the prostate by the frozen section method can be done quickly, the author advises that "the use of surgical biopsy of the prostate be extended."

Harris

COMMENT

In this series of patients, the occurrence of cancer with calculi approximates hypertrophy with calculi, reported by others. Infection is usually present before the urologist is consulted.

The reviewer has found a greater proportion of calculous cases in men averaging a decade younger than those cited above. It is noteworthy that Finkle recorded a history of gonorrhea in earlier life in about 50 per cent of the

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cases. Etiologically, there does not seem to be any explanation for this.

In our own experience, perineal surgery is particularly adapted for larger stones and it eliminates the possibility of recurrence. This method offers the opportunity for accurate and adequate biopsy and for complete removal of carcinoma, when present. Possible impotence, resulting from perineal operation in younger men for calculi, must always be considered.

A. L. H.

Exfoliative Cytology as a Screen Test for Urinary Tract Malignancy

J. M. Silberblatt *(Bulletin of The New York Academy of Medicine,* 29:889, Nov. 1953) reports the examination of smears from the urinary sediment stained by the Papanicolaou method from 494 patients, 462 of whom had no known malignant disease. In 454 cases, the smear was negative, a correct negative diagnosis in 98 per cent of cases; a false positive diagnosis was made in 8 cases, or 2 per cent. In the 32 cases with a malignant tumor of the urinary tract, the correct diagnosis was made from the smear in 26 cases, 81 per cent; a false negative diagnosis was made in 6, or 19 per cent. These 6 cases, in which the smears were negative, included 4 renal tumors and 2 bladder tumors. The diagnosis by means of the smear is more accurate in bladder tumors, because bladder tumors "are constantly bathed in urine." Three illustrative cases are reported showing the value of the cytological examination of the urinary sediment not only as indicating the presence of malignancy before the usual urologic methods of diagnosis are used but also as aiding a correct clinical diagnosis that might otherwise be difficult. This method of cytological examination of the urine, the author concludes, "is valuable as a screening test for malignancy of the urinary tract, but it is not intended to replace the usual urologic procedures."

COMMENT

The Papanicolaou cytological method has been well established and recognized for a number of years. Perhaps the urologist has not made full use of this valued method by extending the search for malignant cells in the urine.

It may be of great assistance as a screening procedure and diagnostic aid in differential diagnosis when utilized with other standard procedures.

Correct positive diagnosis was made by Silberblatt in 81% of a series of twenty-six cases. False positive tests were seemingly rare; false negative much more frequent (19%).

A. L. H.

Bacitracin Solution as an Instillation in Bladder Infection

H. Wechsler and E. J. Frishwasser *(New York State Journal of Medicine,* 53:2831, Dec. 1, 1953) report the treatment of 16 cases of severe cystitis with instillations of bacitracin. In most of these cases an operation, most frequently suprapubic prostatectomy, necessitating the use of an indwelling catheter, had been done. The solution employed was prepared by adding 50 cc. of normal saline to a vial of 50,000 units of bacitracin and agitating until solution was complete, then adding this to 450 cc. of sterile normal solution. This solution was kept under refrigeration, and 2 ounces instilled into the bladder at four hour intervals. The bacterial flora in the bladder in these cases was mixed; *Streptococcus fecalis* and *Aerobacter aerogenes* were the predominating organisms; *B. proteus* was present in 9 cases and *Escherichia coli* in 10 cases. Other antibiotics had been given systemically prior to the local treatment with bacitracin. In all these cases, the urine became clear and cultures became negative within three days; this resulted in rapid healing of

the surgical wounds. The authors suggest that in these cases the effectiveness of bacitracin may be due to "sensitization of bacterial strains after treatment with penicillin and the broad-spectrum antibiotics."

COMMENT

This paper appears to prove the efficacy of instillations of bacitracin solution for relief of cystitis after bladder and prostatic operations. The authors suggest that their striking results may, in part, have been due to the preliminary use of other antibiotics in these patients.

It is interesting to note that the authors have found another use for an antibiotic. The treatment requires specified dosage and dilutions.

The sixteen cases cited had not responded to other forms of systemic and local treatment.

A. L. H.

The Effect of Antibiotics on Spermatozoa in Vitro, Spermatogenesis and their Concentration in Testicular Tissue

H. Seneca and D. Ides *(Journal of Urology*, 70:947, Dec. 1953) report experiments on the effect of various antibiotics, "currently used" in therapeutics, on spermatozoa *in vitro*. It was found that in therapeutic concentrations, Terramycin, Aureomycin, penicillin, streptomycin, Magnamycin, polymyxin, bacitracin, Neomycin and Viomycin do not have any untoward effect on the motility of the spermatozoa; the survival time of spermatozoa is twenty-seven hours and forty-five minutes with Neomycin and Viomycin and over forty-seven hours with the other antibiotics in this group. Polymixin was found to stimulate the motility of spermatozoa. Rimocidin, Thiolution and fumagillin were found to be toxic and to reduce the survival time to about twenty-four hours. In experiments on rats, single doses of penicillin, Terramycin, streptomycin, polymyxin, bacitracin and Magnamycin were found to produce therapeutic levels of these antibiotics in the testes; with all except polymyxin, the concentration of these antibioticin in the testes was increased by repeated injections. It was found also that Terramycin, polymyxin, Magnamycin, bacitracin and penicillin stimulate spermatogenesis, Terramycin being the most active in this respect, and polymyxin also being effective; streptomycin was not found to have any definite effect on spermatogenesis.

COMMENT

The report of Seneca and Ides proves to be of academic interest. Similar experiments, however, may protect the safety of the individual from the deleterious side-effects of antibiotics. Abuse of these agents must be constantly avoided.

The authors produced therapeutic concentrations in the testes of rats and increased them by repeated injections. In most instances, the effect was to stimulate spermatogenesis rather than inhibit it, with no impairment of motility.

A. L. H.

Treatment of Genito-Urinary Tuberculosis

J. G. Gow *(British Journal of Urology*, 25:316, Dec. 1953) states that during the past four years in the treatment of 250 cases of genitourinary tuberculosis the regimen of treatment has been frequently changed, because of progress in the field of antibiotic therapy, and also in the endeavor to overcome the development of streptomycin-resistant strains, and to reduce the toxic reactions to streptomycin and PAS. A modified form of PAS has recently been produced, Calcium B. PAS the calcium salt of N. Benzoyl PAS; the administration of this form of PAS results in a high concentration of PAS in the urine, with a relatively low concentration in the blood plasma, which is of special value in the treatment

of genitourinary tuberculosis. In the more recent series of cases the following regimen has been used: Streptomycin (2 Gm. daily in one dose) and isoniazid (250 mg. daily in one dose) for fourteen days; alternated in the next fourteen days with Tb. 3 (100 to 150 mg. daily in divided doses) and Calcium B. PAS (7 Gm. t. d. s.). These two combinations are alternated every fourteen days for at least six months. If surgery is indicated in any case, the operation is done "under sanatorium conditions." In 22 patients treated for six months on this regimen, the urine has become negative to the guinea-pig test in every case. After the patient's discharge from the sanitarium, a modified regimen may be used for another three months. In this regimen Calcium B. PAS is given by mouth (5 Gm. t. d. s.) and streptomycin 2 Gm. and isoniazid 250 mg. given together twice a week, the injections being given by the patient's doctor or at chest clinics. The results with the use of this regimen have been "most encouraging."

COMMENT

The author's accomplishments are encouraging and indicate an advance in our efforts to control the tubercle bacillus in the kidney. Lattimer and many others have shown the need of all the combined methods of antibiotic and drug therapy, used persistently in various combinations, over long periods of time. By this regimen it has been possible to render the urine entirely free of acid-fast organisms even in the presence of ceseation abscess of the kidney.

Gow cites twenty-two patients treated for six months that proved "guinea-pig negative". He has recorded a new forward step in the use of the less toxic Calcium B. P.A.S. (para-amino-salicylic-acid), which is said to give high urinary concentration with relatively low blood concentration. This is in comparison with the former standard P.A.S. usually employed. Operative surgery still holds an important place in management. However, preliminary, active, combined newer drug therapy is a prerequisite for best results. Surgery should be performed at the "optimum time". Equally essential is the sustained post-operative treatment, both hygienic and medicinal.

A. L. H.

Aureomycin Therapy of Chronic Prostatitis

W. E. Schatten and L. Persky *(Surgery, Genecology and Obstetrics,* 98:40, Jan. 1954) report the treatment of 20 cases of chronic prostatitis with Aureomycin; none of the patients had any other genitourinary disease. The dosage of Aureomycin employed varied from 250 mg. twice daily to 1 Gm. twice daily. The urine was permanently sterilized in only one patient in this series; in this case, the dosage of 250 mg. twice daily was employed; some microrganisms were eliminated from the urine during treatment, and in some cases others appeared in the urine during or after treatment; the in vitro sensitivity of these organisms to Aureomycin was not higher than that of the organisms isolated before treatment. The different dosages of Aureomycin employed did not affect these results. Cultures of prostatic secretion were made at the same time as urine cultures in some instances; in 2 instances the prostatic culture showed growth at a time when the urine culture showed no organisms; in 4 instances, the urine culture showed organisms not present in the prostatic culture. All of the patients in these series showed clinical improvement and diminution of pyuria and prostatorrhea in four to five days after Aureomycin therapy was begun, but there was a recurrence of clinical symptoms and signs at various intervals after treatment was stopped in all patients except the one with permanent

sterilization of the urine. There were only "minimal" untoward reactions to Aureomycin in this series; treatment had to be discontinued in one case, because of nausea. Aureomycin was demonstrated in the urine in 16 patients in a concentration higher than that necessary to inhibit the growth of organisms in vitro. In the prostatic secretion, however, the concentration of Aureomycin was low, not sufficient to inhibit the growth of these organisms. In a previous study, the authors have shown that Furadantin is also ineffective in the treatment of chronic prostatitis. This is to be attributed to the fact that adequate concentration of the antibiotic is not attained in prostatic tissue.

COMMENT

The results of Schatten and Persky are most discouraging and seem to offer a poor outlook for the use of Aureomycin in chronic prostatitis.

The reviewer wishes to cite the following convictions:

I.—That no single antibiotic or other drug should be used to the exclusion of the others.

II.—That careful and repeated bacterial cultures are essential in management.

III.—That prostatic massage and treatment of the prostatic urethra are an important part of treatment.

IV.—That every patient must be individualized

V.—That sensitivity tests are useful, but not altogether reliable. Clinical response may be greater to a drug less efficient in vitro.

VI.—That clinical control of prostatitis is obtainable in a large majority of cases, by painstaking supervision.

Who can prove that drug concentration of high degree in prostatic fluid is a prerequisite to clinical cure?

A. L. H.

GYNECOLOGY

HARVEY B. MATTHEWS, M.D., F.A.C.S*

Radioactive Colloidal Gold in Carcinoma of the Cervix

S. D. Soule *(Western Journal of Surgery, Obstetrics and Gynecology* 61:297, June 1953) reports the use of radioactive colloidal gold in 60 cases of carcinoma of the cervix, followed by radical hysterectomy or intracavity radium therapy. In every case treated, the diagnosis was confirmed by biopsy. The radioactive gold (Au 198) was injected into each parametrium; injections were usually made at three sites in each parametrium with a total dosage of 50 to 75 millicuries. In cases in which hysterectomy was done, the operation was carried out eighteen to thirty days after the injection of the radioactive gold. If operation was not done, a full dose of radium was given following the injection of gold. Direct measurement of radioactivity by means of a scintillation counter at the time of the operation, and determination of radioactivity in the tissues removed at

Matthews

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operation, showed that the injection of radioactive gold delivered about 75,000 roentgen equivalent physical units at the site of injection, chiefly beta rays. The contents of the true pelvis, in addition, received 2000 to 3000 r., chiefly gamma rays. Examination of the tissues removed at operation showed definite evidence of radiation effects or malignant tissue in both lymph nodes and the parametrium. Observation at the time of operation showed that there was infiltration of gold in some of the irremovable tissues on the lateral pelvic wall. While these patients have been treated too recently for evaluation of ultimate results, the findings noted above indicate that the injection of radioactive gold into the parametrium "delivers a much greater amount of radiation" to the regional lymph nodes and the lateral parametrium than any other form of radiation therapy now available. No serious reactions to the injection of radioactive gold was noted in any case, there were no gastrointestinal or genitourinary "disturbances." On the basis of these findings, the author concludes that the use of radioactive gold in cases of cancer of the cervix in addition to operation or radium therapy "may yield a substantial increase in survivors from this disease."

COMMENT

It has long been acknowledged that we have only two basic methods of treating cancer of the cervix, viz.: surgery and irradiation. For the best results we have well known combinations of these methods, pre and post-operative irradiation being the most common. More recently cobalt and gold, in conjunction with irradiation and/or operation have been employed. Since we do not yet know the cause of cancer we are constantly "looking and hoping" for a positive cure. Early diagnosis before metastases occur is our only hope of cure today. The author offers radioactive colloidal gold in cancer of the cervix. His results in 60 cases appear good although not enough time has elapsed since treatment to evaluate final results. We have had no experience with the "gold" treatment but certainly we can find no contraindications to its use. "Early diagnosis" offers the only hope of cure, and the "key man" in the fight against cancer is the general practitioner. He is very apt to see the case first.

H. B. M.

The Effect of a New Potent Uterine Relaxing Factor of the Corpus Luteum in the Treatment Of Dysmenorrhea

G. H. Rezek (*American Journal of Obstetrics and Gynecology* 66:396, Aug. 1953) reports the use of a newly developed factor of the corpus luteum that has been found to have a definite uterine relaxing effect, in the treatment of dysmenorrhea. This preparation has been given by mouth in the treatment of 298 patients with dysmenorrhea, but 72 of these patients who were also given a sedative are not included in this report. In the first series of 73 patients the dosage was 150 or 300 units every four hours; with this dosage, 40 patients obtained complete relief and were able to continue their usual activities during the menstrual period; 20 patients were much relieved but had a few mild cramps; 10 others experienced some degree of relief; only 3 were not benefiited. All these patients were under observation for at least six menstrual periods. Fifteen patients who had had excellent results were treated in one menstrual period when they were having cramps, with 450 units; 13 of these women stated that cramps were almost completely relieved in fifteen minutes. As no undesirable reaction had occurred in any of the patients treated with this corpus luteum factor, a larger initial dose was given

in the second series of patients, ranging from 1,500 to 3,000 units, averaging 2,600 units. With this dosage, pain was relieved in about fifteen minutes, and some patients did not require any further treatment in any one menstrual period. In both series of patients, it was found that patients with a normal endometrium responded more rapidly and more completely to the treatment, than patients with a hypoplastic endometrium. The presence of the corpus luteum factor was demonstrated in the blood of the patients after oral administration by means of "the guinea pig uterus relaxation test" which has been found to be "highly specific" for this factor.

COMMENT

The true etiology of dysmenorrhea is often obscure; and many times unknown. Therefore the treatment must be empirical and not specific. Any therapeutic agent that gives relief in painful menstruation is certainly welcome. We do not mean the relief of pain and discomfort by narcotic and/or analgesic drugs. The drug stores are flooded with such remedies; some actually dangerous to life, none of benefit to the basic cause of dysmenorrhea. According to theory the endocrines under certain conditions should rectify the trouble; and this is true. But indications are not clear and proper dosage is uncertain. The author recommends "a new potent uterine relaxing factor of the corpus luteum" that seems to "do the trick". Complete relief was secured in 70% of his cases. Doses of from 2000 to 3000 units for the first injection are recommended. Many cases got complete relief during a period from one injection. Those patients who had a normal endometrium got the best relief. For obvious reasons, this method of treatment is not very practical for the general practitioner; and hence he must still treat dysmenorrhea "symptomatically".

H. B. M.

Pelvic Endometriosis; Treatment with Methyl Testosterone

S. N. Preston and H. B. Campbell (*Obstetrics and Gynecology*, 2:152, August 1953) report 187 cases of pelvic endometriosis in most of which diagnosis was made on the basis of the clinical history and premenstrual pelvic examination; in 16 cases in which operation was done for some other condition, the diagnosis of endometriosis was confirmed by biopsy. The most common symptom in these cases was dysmenorrhea, which was severe in 62 per cent; dyspareunia was noted in 90 cases; menometrorrhagia in 76 cases; and mastalgia in 49 cases; 80 patients sought treatment because of sterility. The treatment employed in this series was methyl testosterone given by mouth in a dosage of not more than 300 mg. a month; treatment was usually continued for four to six months; and repeated courses of treatment were given as indicated. Dysmenorrhea was completely relieved in 79.1 per cent, and partially relieved in 10.7 per cent; dyspareunia was completely relieved in 80 per cent and partially relieved in 16.6 per cent; mastalgia was completely relieved in all those patients who complained of this symptom. The nodules of endometriosis began to regress during the second month of treatment and became progressively smaller; they diminished to at least one-third of the original size and were no longer painful on palpation; in some cases the nodules became so small that they could not be palpated. Of the 80 patients who complained of sterility, 48 became pregnant while under treatment with methyl testosterone; the average duration of the sterility in this group of patients had been 4.2 years. Only 6 patients developed facial acne while taking methyl testosterone and 2 showed a tendency to hirsutism; these symptoms disappeared when treatment was

stopped. Many of the patients noted an improvement in general health and an increased feeling of well-being. The use of methyl testosterone in the treatment of endometriosis, the authors conclude, offers these patients "a substitute for eventual surgery, a reproductive life free from discomfort, and the possibility of an otherwise unobtainable pregnancy."

COMMENT

Pelvic endometriosis is a difficult problem, particularly in the young women. Up until fairly recently operation was thought to be the only efficient remedy. However, more recently we have been amazed at the results obtained by the use of testicular therapy. The authors' brilliant results with methyl testosterone is ample evidence that such therapy "works". The **modus operandi** we leave to future research; good results make satisfied patients and we shall continue its use in pelvic endometriosis. Operation may finally have to be performed to effect a "perfect" cure but at least the patient will have arrived at a more suitable castration age or has had time to have a family before coming to total hysterectomy with the removal of both tubes and ovaries. Of course if operation must be done for the relief of intractable symptoms in a younger woman desirous of children, conservation should be the "order of the day". We have had "several" pregnancies following such a procedure for pelvic endometriosis.

H. B. M.

Medical Book News

Edited by Robert W. Hillman, M.D.

Ophthalmology

Physiology of The Eye. Clinical Application. By Francis Heed Adler, M.D. 2nd Edition. St. Louis, C. V. Mosby Co., [c. 1953]. 8vo. 734 pages, illustrated. Cloth, $13.00.

This is a very readable introduction to the general field of ocular physiology. It is a moderate revision of the 1950 edition and retains the same good format. Certain sections have been amplified and brought up to date in keeping with changing concepts in our rapidly growing literature and to minimize the inevitable lag between research literature and the textbook.

The book is addressed primarily to the student and the clinician in an attempt to acquaint him with the elementary phases of various aspects of the physiology of the eye and to correlate wherever possible laboratory findings with clinical concepts. No attempt is made to survey exhaustively the entire field of physiologic research. This is an asset rather than a fault. The reader is not lost in a morass of conflicting data (a situation in which he has frequently found himself) and is encouraged rather to read further than to give up.

Emphasis is placed wherever possible on the newer biochemical approaches. In this manner the sections on corneal permeability and on the aqueous tumor are treated particularly lucidly. They may be read without any prior knowledge of the field. This is true of all sections of the book, making it particularly valuable to the student.

It is good to see that the subject of retinal physiology, as it pertains to such matters as visual purple, dark adaptation and other sensory functions, has become an integral part of the standard textbook and is no longer hidden in the laboratory. Wald's recent work on the visual purple cycle is included. The photochemical interpretation of dark adaptation and intensity discrimination as elaborated chiefly by Hecht is discussed. The section on color vision could have been more detailed, both in the theoretical discussion and in the description of the various types of color blindness.

It is difficult to maintain an even balance in the writing of such a book, and authors are often carried away by the particular field of their interest. Adler has succeeded in maintaining a fairly good balance throughout, without too much over-emphasis in certain areas and omissions in others. This book is not to be thought of as a reference book in visual physiology, but serves rather as a good introduction.

JOSEPH MANDELBAUM

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Child Psychiatry

Clinical Management of Behavior Disorders in Children. By Harry Bakwin, M.D. & Ruth Morris Bakwin, M.D. Philadelphia, W. B. Saunders Co., [c. 1953]. 8vo. 495 pages, illustrated. Cloth, $10.00.

This volume is well organized, and its presentation with all clinical aspects is easily comprehended. The behavior problems discussed are those due to all causes. Etiology and treatment are fully described. This book is most informative for those in pediatric practice, and those working in close association with child psychiatrists. It specifically evaluates the relationship between genetic endowment and environmental factors.

The Bakwins' background and experience are excellent in this particular field. This book is highly recommended not only for pediatricians but also for social workers, medical students, and even mothers.

JOHN A. MONFORT

BOOKS RECEIVED

Psychosomatic Case Book. By Roy R. Grinker, M.D. & Fred P. Robbins, M.D. New York, The Blakiston Company, [c. 1954]. 8vo. 346 pages. Cloth, $6.50.

Third Annual Report on Stress. By Hans Selye, M.D. & Alexander Horava, M.D. Montreal, Canada, Acta, Inc., [c. The Author, 1953]. 8vo. 637 pages, illustrated. Cloth, $10.00.

The Mechanism of Inflammation. An International Symposium. Edited by G. Jasmin, M.D. & A. Robert, M.D. Montreal, Canada, Acta, Inc., [c. 1953]. 8vo. 308 pages, illustrated. Cloth, $8.50.

Investing For The Successful Physician

Prepared especially for Medical Times by Merrill Lynch, Pierce, Fenner & Beane, Underwriters and Distributors of Investment Securities, Brokers in Securities and Commodities

COMMON STOCKS

In the previous two articles we considered the three general investment objectives—safety, income and growth. We listed some of the important considerations that should always come before any investment in corporate securities — insurance, home-purchase, professional equipment, a savings account for emergencies and so forth. Last month's article covered the so-called "Safety Group—Bonds and Preferred Stocks." And our current discussion will explore the "Income and Growth" segments of securities investment; namely, common stock.

What Common Stock Is, and Why

The oldest form of business is what the economists call an "individual proprietorship." It is simply a man in business for himself. He puts up the money, assumes the risk and receives the profit, if any.

Partnerships, a second type of business organization, are simply men in business for themselves. Two or more people agree to merge their capital and effort, then divide the profit or jointly stand the loss.

When business began to expand under the influence of the great explorations (beginning with Marco Polo and

Proprietorship

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reaching a peak, at least for us, with the establishment of the American colonies) a new type of business organization was called for. Individual businessmen, even partnerships, could not raise the larger amounts of capital needed. Joint stock companies were formed to meet this need for heavy concentrations of capital.

The East India Company, chartered in 1600, was the first big successful joint stock company established in England. The Dutch West India Company helped to develop our Hudson Valley, and the London Company financed the establishment of Jamestown, Virginia. These early stock companies had several characteristics that modern corporations still enjoy. In the first place, unlike an individual or partnership, they theoretically lived forever —their corporate personality was perpetual.

Where in a partnership each partner is liable for all the debts of the partnership, in modern corporations the liability of each stockholder is limited to the amount of money he has invested (with a very few exceptions). If the corporation fails because it cannot pay its debts, the stockholders or owners ordinarily lose only what they put up for their stock and owe nothing on the unpaid debts of the company.

There are nearly half a million incorporated businesses in America today that are owned and controlled by individual citizens acting in a private (that is, non-governmental) capacity. In a limited sense, the people who own a corporation are partners—they put up the money that makes business possible. If the business is profitable they share the success. If it fails, their investment is lost.

This outline of the corporate form gives at least a hint of its character but, before you invest in a corporation by putting your hard-earned cash into common stocks, a somewhat more detailed understanding is needed.

Corporations and the Investor

In the first place, the modern corporation is a legal personality. It can own property, borrow money, sign contracts, sue and be sued just like a person. The organization of this *legal being*—the corporation—may be very simple or tremendously complex. We are going to assume simplicity in our description, but this extreme simplicity is seldom found in the actual business world.

The corporation is owned by its stockholders. The terms and conditions of ownership are set forth in detail in the law of the state of incorporation and the charter and by-laws of the company. The common stockholders have a right, generally, to vote for the election of directors and to share in the

Corporation

The investor must:

a) pick an industry

b) pick a company

c) pick a security that meets his need.

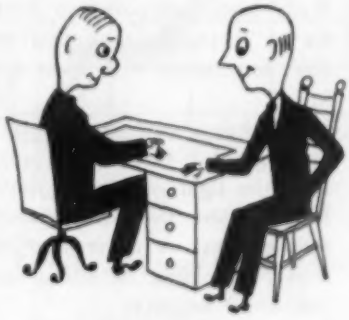
distribution of profits—and of assets if the corporation is dissolved. Common stockholders are *owners.*

The size of most publicly owned corporations makes is impractical for the individual stockholder to take an active part in management. An individual stockholder may be an owner, but he's seldom the boss. Instead, he exerts his influence by voting. The members of the board of directors of a corporation are the representatives of the stockholders. They are voted into power and occasionally voted out of power by the shareholders.

The directors of a company select the officers who run the company. The president, vice-president, secretary and treasurer, together with all of the managers, department heads, supervisors, foremen and workmen are the employees. The directors hold the power to hire and fire the president and other top officers. The directors and the officers work for the stockholders.

Some corporations, like some individual businessmen, manage to get along on what they have without borrowing. Many companies, however, need more capital to expand their business. Banks are a common source of short-term money (that is, money which is to be repaid in a few months), but if the corporation needs long-term or permanent capital, the most common practice is to sell additional stock or bonds. Bondholders, incidentally, are *creditors.* They do not own the business, but lend money to it.

Your Decision . . . Diagnosis and Prognosis Common stock investment differs in one important respect from the investment one makes in his own business. The individual businessman who puts his capital to work in his own business is relying on his own ability as a business manager. As the decisions of each day are made, his judgment is tested. At every step the success or failure of the business and the profit or loss on his money is under his personal control.



When you invest in common stock, you invest in a business that is managed by someone else—the directors, the president, vice-presidents, etc., of the corporation. Day-by-day business decisions are not made by the investor. This is a fundamental difference; but it does not mean for an instant that wise investment does not call for decision on the part of the investor.

The investor's decision is of a different kind. When you invest in common stock it is your task to pick the industry, then the company, and finally, the security that best fits your need. It's your continuing job to keep an eye on the industry and the company so that you can withdraw if economic conditions or inept management threaten the company's future.

There are no general rules that will guarantee your making successful decisions. There are a few principles, however, that every investor should paste in his hat.

1. Your investment objective should determine the securities in which you invest.
2. Write down your objective and refer to it regularly so that you don't unwittingly drift away from it.
3. Do not buy a security until you've investigated it thoroughly, judged it in the light of your objective.
4. Review your holdings regularly, jotting down on paper your reasons for holding or selling each individual security.
5. Keep in mind that *facts*—not tips, hunches or emotions—are the only sound basis for action.

As we mentioned previously, your objective—safety, income or growth—determines the proportion of each type of security you want to include in your portfolio—bond, preferred stock or common stock.

Assuming, for purposes of illustration, that you want to add a growth common stock to your portfolio, the first question is: "How do I pick an industry in which to invest?" To give you some idea of the range of industries, we have listed in the next column a more or less typical breakdown.

You will recognize that some of these industries are old timers, some are young. Some you probably know a lot about, others are relatively foreign to you. There are two ways in which you can learn more about any one of them. You can find someone experienced in

Agricultural Machinery
Aircraft Manufacturers
Air Transportation
Amusements
Automobiles

Auto Accessories
Banks
Beverages
Building Supplies
Chemicals

Containers
Drugs
Electrical Equipment
Foods
Household Equipment

Insurance and Finance
Machinery
Merchandising
Metals
Paper

Petroleum
Public Utilities
Railroads
Railroad Equipment
Rubber Products

Steel
Sugar
Tobacco

investment matters and ask him, or you can proceed to read up on the industry yourself (next month our article will discuss some of the industry groups).

Before taking either of these steps, however, you will want to know the questions to ask and have some rules for judging the answers. Otherwise you might do a vast amount of work and still end up with a pig in a poke.

Intelligent appraisal of an industry requires some knowledge of its history. And the picture on any given day is of little importance compared to the pattern it makes over the months and years.

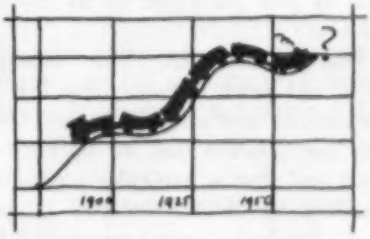
As you read about or discuss an industry, look for evidence that discloses the pattern of its growth. Is it inching forward, or slipping back, booming or depressed? Does its volume hold up well in slack times, or does it lead the depression parade? Try to gain a picture of it in terms of its growing or declining importance to the economy as a whole. Competition, present and potential, is a vital factor in determining future patterns. Few industries die of their own accord. They're usually pushed. Some new industry comes along to supply the economic need better . . . or in some way eliminates the need for the old industry. (The automobile did not compete with the buggy whip, but it made it unnecessary. On the other hand, the automobile business "made" the gasoline business. The petroleum industry was relatively small until the automobile created a new demand.)

Questions You Will Want to Ask

This brings us to a number of specific questions you will want to ask, not only about the industry, but also about any individual company:

Who are its customers?
What basic factors determine their demand?
Who are the competitors?
What threat do they offer?
How is the industry's raw material supply?
What is the labor situation?
How is the industry likely to be affected by impending events?

These are not all the questions you should consider, but they are some of the more important ones and indicate your lines of inquiry. When you have adequate answers to these questions you should be able to say to yourself: "This industry is in a fundamentally sound economic position and has prospects for growth"—or the contrary.



Each industry makes a pattern.

When you are satisfied that the industry is a good one, the really critical job begins in selecting a company for your investment. You will want to view each possible candidate under four main headings:

Economic position and prospects
Financial condition
Management
Price of the common stock

Under the general heading of *economic position*, you will want the same type information about the particular company that you looked for in the industry. Of course in practice you will accumulate this information about the company and the industry at the same time. You should give particular emphasis, however, to the standing of the company within its industry, the competition it faces from similar companies, and its past compared to its current position.

Financial Condition, like management and price, is something that is peculiar to each single company. Once you are satisfied that an industry is good and that a particular company's standing within the industry is generally favorable, your investigating becomes a job of close inspection—you'll want to take your prospective company apart and see what it's made of dollar-wise.

Financial analysis is really too big a subject to try to crowd into this article. In many respects it is the most important single phase of investment study. Before we drop the subject, however, there are a couple of cardinal points that you want always to bear in mind.

First—the earnings of the company over a period of years are vastly more important than the figures for any single year.

Second—total figures are of little importance. The relationship between figures is the important thing. (Not total net income, but net income per share; not total current assets, but current assets in relation to current liabilities.)

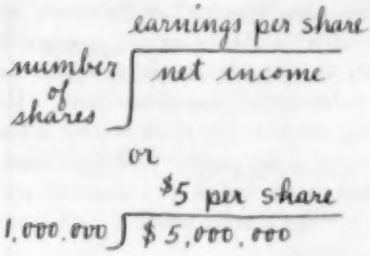
Management—the quality of management—is a hard thing to evaluate. For the most part you will have to rely on the measure provided by such things as changes in the company's financial condition, its earnings record, sales, employee relations and so forth. However, as we've already mentioned, when you invest in corporate securities you must rely on the managerial skill of others to run the business. You will want to know something of their reputation certainly; and imagination too.

Price is usually a crucial factor in selecting a common stock for investment. The stock in any going concern might be a buy if it were low enough in price, and too, there is a point beyond which it would be silly to reach for the shares of even an exceptional company.

Except for some government bonds, securities do not have a set price. (Par

"How To Read A Financial Report" is yours for the asking.

value has little meaning except when a security is first sold by the company.) Prices vary with company earnings, business psychology, industry outlook, dividend payments, world events, and



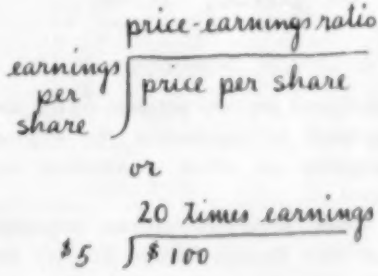
other factors. The more speculative a security is the more its price will vary. Furthermore, common stock prices often vary independently of earnings. Let's use an example to see just what this means.

XYZ Manufacturing Company, Inc., has 1,000,000 shares outstanding. It has a good management and business was good enough last year let's say, so it chalks up a net profit of $5,000,000. As XYZ Manufacturing has 1,000,000 shares outstanding, this means the company earned $5 for each share of stock outstanding (because $5 was earned does not mean that the directors will declare $5 in dividends).

"What is a share of XYZ Manufacturing worth?" *We* can get some widely different answers. In optimistic periods it might have sold for $100 a share or 20 times its annual earnings. During some of the very pessimistic periods it might have sold for $25 a share, or even less ($25 a share would be 5 times earnings).

The important thing to remember is that *over a period of time* XYZ Manufacturing has sold at prices ranging from five times earnings to twenty times earnings. Stocks of solvent companies have frequently sold from three to thirty times earnings. Stock prices never go to zero even when the company's profits turn to net losses. Incidentally, this ratio of price to earnings varies widely between different industries and even among companies within the same industry.

We assumed in our illustration that XYZ Manufacturing was well managed and reasonably prosperous. Given these facts, we still cannot say that XYZ is the stock to buy. That depends a lot on its price at the time a decision must be made. At $25 a share, or 4 times earnings, it might be a bargain. At



$100 a share, or 20 times earnings, XYZ Manufacturing might well be considered too high priced. At $50 a share, 10 times earnings, we might take another look at the company's *prospects*. If the company showed steady growth, it could be a "buy" at 10 times earnings. If it shows little or no growth, we might consider selling.

In making up your mind on the vital question of price, you will want to consider the following points: 1) What are

the prospects for the company in terms of competition, economic usefulness and growth? 2) How does the current price-earnings ratio compare with that of similar companies? Remember: Business prospects are often anticipated by stock prices . . . the "ground floor" you get in on could easily be the roof as far as price is concerned.

All investment experience proves that "when to buy" ranks equally in importance with "what to buy". Similarly, the informed investor will recognize that there is no security which can be "bought and forgotten"—successful investment requires periodic review and appraisal to supplement the original judgment on which a purchase was based.

Price is often all important in buying or selling stocks.

These principles are so important that they literally cannot be over emphasized. (In next month's discussion we will consider timing—and methods of investment which minimize the effects of faulty timing.)

As a final word: *The intelligent investor realizes that prices of securities constantly change and that the market value of his portfolio will not remain static. He is aware of the advantages of maintaining some sort of balance in his investment funds between high-grade fixed income obligations and common stocks and is alert to changes dictated by new developments affecting security prices and prospects.*

The following industry groups are listed according to market prospects as of the date shown. Since changes occur at varying intervals, you are advised to check for more recent information before making an investment decision. An "average" or "relatively unfavorable" rating does not necessarily imply that the *long-term prospects* for an industry are considered poor. The rating refers to the stock *market action* expected at the present time from stocks within each industry compared with the average market action for all industry groups.

Each industry's market prospects are given under one of the following categories:

"relatively favorable"—group should perform better than the market as a whole.

"average" — group's performance should approximate that of the market.

"relatively unfavorable" — group should perform worse than those in two higher categories.

It is important to remember that all market prospect ratings for groups are related to the general stock market price trend regardless of direction. Market prospect ratings also take into consideration technical factors such as the recent price behavior of stocks within each industry.

Common Stock Selections — Security selections have been classified as follows:

"Investment Type"—These are stocks of companies in strong financial circumstances, with sound capital structures, demonstrated earnings ability in good times and bad, and long dividend records. It also may

MARKET PROSPECTS

Relatively Favorable—

BUILDING SUPPLIES—Air Conditioning
INSURANCE AND FINANCE—
  Auto Finance
MERCHANDISING—Food Chains
MISCELLANEOUS—Containers—Metal

Average—

AGRICULTURAL MACHINERY
AIRCRAFT MANUFACTURERS
AIRLINES
AUTOMOBILES—
  Major Passenger Car Producers
  Trucks
AUTOMOBILE ACCESSORIES
BANKS
BEVERAGES AND CONFECTIONERY—
  Beer
  Candy
  Chewing Gum
  Soft Drinks
BUILDING SUPPLIES—
  Cement
  Plumbing and Heating
  Roofing and Wallboard
CHEMICAL—
  Basic Chemicals
  Sulphur Producers
  Fertilizer
  Paint
DRUGS—Ethical, Proprietary
ELECTRICAL EQUIPMENT
FOOD—
  Biscuits, Bread Baking, Corn Refining
  Dairy
  Milling, Packaged Foods
  Canning, Meat Packing
  Soap
  Vegetable Oil
HOUSEHOLD EQUIPMENT—
  Carpets
  Hard Floor Coverings
  Stoves
INSURANCE & FINANCE—
  Fire-Casualty Insurance
  Small Loan
MACHINERY—
  Construction Machinery
  Heavy Machinery
  Oil Field Equipment
MERCHANDISING—
  Apparel Chains
  Department Stores
  Mail Order Chains
  Drug Chains
  Variety Chains
METALS—
  Aluminum
  Copper, Gold
  Lead & Zinc
  Metal Fabricating
MOTION PICTURES & AMUSEMENTS—
  Production and Integrated Cos.
  Theatre Cos.
NATURAL GAS—
  Integrated Pipe Line Cos.
  Producers
  Gas Distributors
PAPER AND PULP—
  Diversified Producers; Paper Makers
PETROLEUM
PUBLIC UTILITY HOLDING COS.—
  Companies Close to Liquidation
  Integrated Companies
PUBLIC UTILITY OPERATING COS.—
  Electric
  Telephone
RAILROADS—
  Land Railroads (Oil & Metals)
Agr. & Indl. Roads—Western, Agr. &
  Indl. Roads
  Southern
  Indl. Roads—Eastern
  Coal Roads
RAILROAD EQUIPMENT—Tank Car Cos.
RUBBER
STEEL
SUGAR—Beet Sugar Processors
TOBACCO—
  Cigarettes; Snuff
  Cigars
MISCELLANEOUS—
  Containers—Glass
  Textiles

Relatively Unfavorable—

AUTOMOBILES—
  Independent Passenger Car Producers
BEVERAGES—Liquor
CHEMICAL—Rayon
MACHINERY—Machine Tools
PAPER & PULP—Container Cos.
RADIO & TELEVISION
RAILROAD EQUIPMENT—
  Car Builders
  Locomotive Makers
  Parts & Equipment Cos.
SUGAR—
  Cuban Cane Producers
  Puerto Rican Cane Producers
MISCELLANEOUS—Office Equipment

include long-term growth stocks.

When "investment type" stocks sell at levels where price risks have been substantially increased, they might be either eliminated or transferred to "good quality—wider price movement". The latter classification recognizes the possibility of wider price fluctuations than might be expected of investment type issues.

"Liberal Income"—Selections cover a wider range in quality but provide a better than average yield. The current dividend is likely to be maintained in the near future, but the possibility of a change in dividend is greater than in the preceding group. Growth frequently is lacking.

"Good quality-wider price movement"—Stocks are of good quality but prices, because of greater sensitivity to business conditions, may be expected to move over a wider range than those classified as "investment type".

"Speculative"—Stocks of lower quality which will probably fluctuate over a fairly broad price range for a number of reasons such as the unstable or cyclical character of the business engaged in or because of the large amounts of debt and/or preferred stocks ahead of the common. (The latter situation tends to create "leverage" which can effect extreme variation in common stock dividends.)

Where the Market Prospects for the industry are rated "relatively unfavorable," we do not suggest purchase of securities within the industry.

The list on the following page represents a typical diversified group of issues considered attractive at the prices and as of the dates indicated:

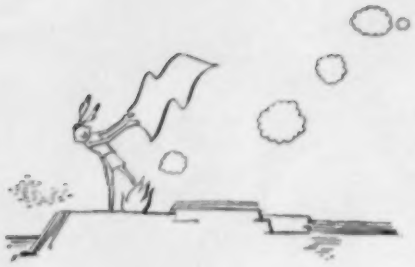
Investment Discussion Investors are confident that the recession in business which started last fall and is continuing at this writing, will not develop into anything serious. They have, therefore, been willing to pay progressively higher prices for leading common stocks which are now selling at the best levels since 1929.

There are no positive indications at this time that the slump in business has run its course, but there are indications that the normal spring upturn which was slow getting started this year is now under way and we hope may be just as slow stopping. This would mean good second quarter reports. A reasonable working assumption at this time would be that corporate sales in 1954 would show a modest decline from 1953, that profit margins would narrow reflecting keen competition, and that net earnings would be lower but cushioned in many cases by tax credits and the absence of excess profits taxes. In some cases lower reported earnings will be the result of substantial accelerated amortization charges which represent fast 5-year write-offs of plant and equipment considered by the government to have been important for national defense. Without these fast charge-offs, corporations would report higher earnings and pay higher taxes. With fast charge-offs, corporations retain money otherwise paid in taxes, resulting in a large unpublicized cash flow which is important to the analyst and careful investor. This cash flow should be of assistance in the support of current dividends. In general, present dividend rates will be earned and paid but there will probably be fewer increases than in recent years. There may also be a few dividend disap-

SELECTED ISSUES

	Earnings—$ per Share 1953	1952	Consec. Years Div. Paid	Divs.—$ per Share Paid 1953	Paid or Decl. Last 12 Mos.	Approximate Price 5-26-54	Yield %
Investment Type							
American Can	2.56	2.25	32	1.40	1.40	43	3.3
Amer. Home Products	3.39	3.06	36	2.30	2.40	54 1/8	4.4
Amer. Insurance	2.58	2.32	83	1.10	1.20	29 3/4	4.0
Chase Nat'l. Bank	3.90	3.62	76	2.00	2.00	46	4.3
Continental Can	4.29	4.22	32	2.40	2.40	65 3/8	3.7
Corn Prod. Ref.	5.42	4.60	35	3.60	3.85	72	5.3
Fidelity Union Trust	5.76	5.23	62	2.40h	2.40	55 3/4	4.3
Gulf Oil	7.13	6.01	19	2.00k	2.00k	59 3/8	3.4
National Biscuit	2.61	2.56	56	2.00	2.00	40 1/8	5.0
North American Co.	1.47	1.37	46	m	—	23 1/4	—
*Pacific Gas & Elec.	2.82	2.31	36	2.05	2.20	42 1/8	5.1
Phila. Nat'l. Bank	8.47	8.09	111	5.00	5.00	107 1/2	4.7
Reynolds Tobacco B	3.12	2.90	54q	2.00	2.40	39 1/4	6.1
Swift & Co.	5.72	3.66	22	2.40	3.00	46 3/4	6.4
Woolworth	3.07	3.25	43	2.50	2.50	41 5/8	6.0
Liberal Income							
American Tobacco	5.84	4.79	50	4.00	4.40	61 5/8	7.1
Calif. Elec. Power	0.88	0.89	12	0.60	0.60	10 7/8	5.5
Dana Corp.	4.35	3.73	19	3.00	3.00	38 3/4	7.7
*General Public Util.	2.30	2.17	9	1.60	1.70	31 1/4	5.4r
Glidden Co.	3.10	3.04	22	2.00	2.00	35 1/4	5.7
Louisville & Nashville	13.10	10.73	21	5.00	5.00	69	7.2
*New Eng. Elec. System	1.24	1.18	8	0.90	0.90	15	6.0
*Pub. Service Elec. & Gas	1.80	1.92	31	1.60	1.60	27 3/4	5.8
Good Quality: Wider Price Movement							
Alum. Co. of Amer.	4.71	4.19	16	1.57 1/2	1.60	73 1/2	2.7
C.I.T. Financial	3.62	3.08	31	1.80e	2.00	34 1/2	5.8
Eastern Air Lines	3.20	3.43	4	0.50	0.50	23 1/8	2.2
Goodyear T & R	10.28	8.30	18	3.00u	3.00u	63 1/2	4.7
Household Finance	4.70	4.16	38	2.35	2.40	53 3/8	4.5
Illinois Central	18.59	16.26	5	4.50	5.00	94	5.3
McGraw Electric	6.90	7.03	21	3.50	3.50	83	4.2
Paramount Pictures	3.06	2.52	5	2.00	2.00	32 1/4	6.2
Puget Sound Pr. & Lt.	1.85	1.50	12	1.27 1/2	1.64	29 1/4	5.6
Skelly Oil	5.44	4.88	18	1.62 1/2	1.60	48	3.3
Standard Brands	2.90	2.72	56	1.70	2.00	33 1/4	6.0
*United Gas Corp.	1.99	1.56	10	1.25	1.25	32	3.9
Victor Chem. Works	1.76	1.39	28	1.15	1.20	33 1/4	3.6
Wesson Oil & Snow.	2.88	2.74	28	1.40	1.40	28 7/8	4.8
Speculative							
*Carrier Corp.	4.19	4.87	7	1.85	2.00	58 5/8	3.4
*Gulf Interstate Gas	—	—	—	—	—	9 1/2	—
Republic Steel	9.25	7.21	15	4.12 1/2	4.50	58 1/4	7.7
St. Regis Paper	2.51	2.32	8	1.25	1.50	27 1/8	5.5
Texas East. Trans.	1.33	1.11	5	1.00	1.00	21 1/4	4.7
Trans World Airlines	1.52	2.38	—	x	Nil	14 1/2	—

*—Offering of new issue based on data contained in Prospectus; available upon request. a—Adjusted. h—Plus 1/9 share for each share held. k—Plus 4% stock. m—Paid 1/10 share Union Electric and $.30 in cash. q—Includes both classes of common. r—Current annual rate including indicated $.20 annually from Manila subsidiaries. u—Plus 3% stock. x—Paid 10% stock.



pointments among the secondary companies in competitive industries.

Although common stock prices have advanced materially, they still appear reasonable in relation to the earnings and dividend assumptions set forth above. With the average yield of good quality common stocks still above 5%, there is an incentive for institutional investors to buy in preference to high-grade bonds now yielding less than 3%. Funds for investment continue to accumulate in the hands of institutions and should be a support for good quality issues.

If the dividend credit being considered by Congress should become law, there would be another incentive for the purchase of liberal yielding stocks. Recent reductions in excise taxes, while saving individuals an estimated one billion dollars may have an even greater effect psychologically and should benefit retail sales and amusement enterprises.

The favorable tax possibilities, plus the seasonal upturn in business now under way, have undoubtedly been important factors in the recent market strength. However, it does not appear that these have been fully discounted if nothing happens to change the present course of events. High yielding issues in the steel, building materials and oil groups have performed favorably in recent markets but these issues are still among the more attractive from an income standpoint.

Certain other groups have discounted the possibility of a severe business decline and have not neglected basic improvement in their business in recent years. Some of these groups participated in the 1946 market rise and have been almost dormant since then. The

airlines and textiles are examples. The steels have never reflected the tremendous improvement in physical plant and financial strength which has taken place in the last 10 years.

Any change or an indication of change in the capital gains rate might possibly increase the supply side of high-priced, low-yield groups and create a demand for the lower-priced higher-yielding issues.

If the market should develop increasing speculative tendencies as it might over the near term with increasing participation by the investing public, there is a good chance that the wide market disparity between the better quality high-priced, low-yielding groups and the more volatile speculative issues could narrow.

There is also the real possibility that one of these days investors will once again start to think in terms of inflation. Some of the factors that might help to bring this about include the probability of lower tax collections on corporate income this year coupled with tax relief already granted and the possibility of additional tax relief plus more active government spending should conditions demand it. All this would mean more deficit financing and the raising of the ceiling on the public debt.

Military developments throughout the world will continue to affect investment decisions. Interest in Indo-China might mean an increase in expenditures in that area. Also the whole concept of spending by the military appears in process of change now that the hydrogen bomb is a reality. The transition from the traditional World War II armament spending to these new weapons of attack and new measures for de-

fense would seem to place more emphasis on guided missiles and expensive and complicated electronics equipment both for offensive and defensive purposes. It is conceivable that the amount of spending by the military may eventually stabilize at a lower figure than currently prevails but that will depend on world-wide conditions which cannot now be foreseen.

It is hoped that the reality of the hydrogen bomb may usher in an era of peace. It may hasten the peaceful applications of atomic power which promise to stimulate new growth industries for the future, although it is probably still some time away before this can become an economic fact.

The substantial increase in common stock prices at a time when business appears to be leveling off should provide an unusual opportunity for investors to re-examine portfolios in the light of long-range prospects, to weed out issues of companies which can probably do no better than maintain an even keel and to select those representative of the companies expected to participate in the over-all continuing growth of the country. There is a possibility that at some point common stocks will again sell at prices which appear excessive in relation to near-term prospects, but at the moment we continue to feel that long-range possibilities remain favorable.

Next Month: INVESTMENT PLANS

AN EXERCISE IN DIAGNOSIS— THE CASE REPORTS

IN addition to our regular quota of original articles, "Refresher" articles and departments, this issue, and every issue, contains selected Case Reports from the Clinico-Pathological Conference at New York University-Bellevue Medical Center. You will find them on pages 416-420. We recommend these studies as interesting and stimulating.

a *penetrant* emulsion for chronic constipation

KONDREMUL® (PLAIN)

COLLOIDAL EMULSION OF MINERAL OIL AND IRISH MOSS

permeates the hard, stubborn stool of chronic constipation with millions of microscopic oil droplets, each encased in a film of Irish moss . . . makes it more movable

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KONDREMUL *(With Cascara)*—0.66 Gm. nonbitter Ext. Cascara per tablespoon. Bottles of 14 fl.oz.

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When taken as directed before retiring, KONDREMUL does not interfere with absorption of essential nutrients.

THE E. L. PATCH CO. — STONEHAM, MASSACHUSETTS

LETTERS TO THE EDITOR

—Concluded from page 44a

larger tumors cannot be safely treated is incorrect. We have several ten year cures in patients whose tumors measured over 4 cm. in diameter and up to 2.5 cm. in thickness.

The dangers of radiation therapy are well recognized; they are exceeded only by the dangers of inadequate surgical removal. This happens all too often in connection with office surgery. It is perfectly understandable that the surgeon will hesitate at the last moment to be as radical in removing a cancer about the face or lips as he should be.

In summary, therefore, I should hope that your magazine would carry articles featuring "the best treatment" rather than "the most convenient office treatment." In this manner more cancers would be cured with good cosmetic result, with economy (since operating room expenses are avoided), and with safety when the radiotherapy is given by competent physicians.

L. Henry Garland, M.D.
San Francisco, Calif.

Likes MT

Dear Doctor:

I find MEDICAL TIMES a most practical and time-saving aid in keeping pace with recent medical developments and therapeutics.

Congratulations.

John L. Garrett, M.D.
San Jose, Calif.

A "Birdie" in PSORIASIS

RIASOL makes you feel like a champion when the skin patches of psoriasis quickly fade away and disappear. As compared with 16½% remissions by other methods, RIASOL gave successful results in 76% of a series of cases.

Roughly speaking, RIASOL does the job in three cases out of four, as compared with an average of one case in six for other treatments.

You can get a good score in psoriasis by treating every case with RIASOL. Now is the best time to start, because exposure to summer sunlight is beneficial.

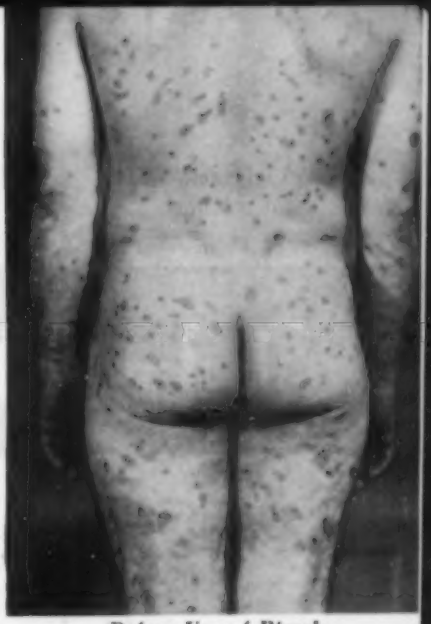
In a period of weeks in most cases, the ugly skin lesions of psoriasis began to fade in a series of cases treated with RIASOL. With this result, your patient will consent to wear an abbreviated bathing suit and get the combined benefits of RIASOL and direct sunlight.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

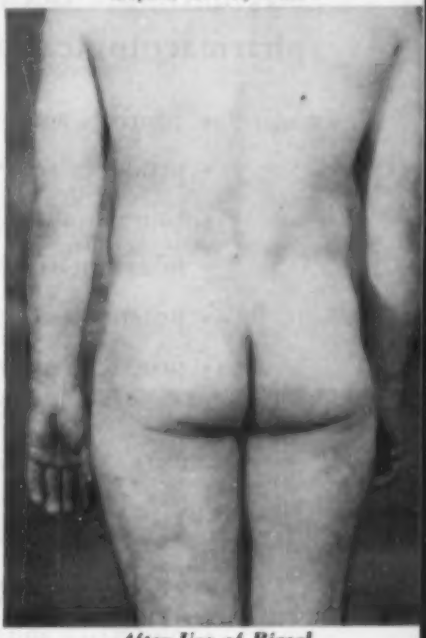
Apply daily after a mild soap bath and thorough drying. A thin invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

Ethically promoted RIASOL is supplied in 4 and 8 fld. oz. bottles at pharmacies or direct.

MAIL COUPON TODAY — TEST RIASOL YOURSELF



Before Use of Riasol



After Use of Riasol

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MT 6/54

Please send me professional literature and generous clinical package of RIASOL.

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RIASOL for PSORIASIS

Announcing

THORAZINE*

a remarkable new drug

—remarkable because of its diverse pharmacological activity:

- controls apomorphine-induced vomiting in dogs
- produces sedation without hypnosis
- causes muscular relaxation
- interrupts conditioned reflex in rats
- potentiates analgesics, anesthetics, sedatives
- produces hypothermia

—remarkable because preliminary clinical studies have indicated its potential usefulness in:

- general medicine
- obstetrics and gynecology
- neuropsychiatry
- anesthesiology
- surgery
- dermatology
- pediatrics
- geriatrics

*Trademark for chlorpromazine hydrochloride, S.K.F. Chemically it is 10-(3-dimethylaminopropyl)-2-chlorphenothiazine hydrochloride.

Patent 2645640

a new therapeutic agent with profound pharmacological activity

'Thorazine' first attracted attention when laboratory studies demonstrated that it exerted unique effects on both the central and autonomic nervous systems, the cardiovascular system and the skeletal-muscular system. It seemed clear that with a compound that possessed such a diversity of pharmacological effects, the scope of its possible clinical applications would be extremely wide.

'Thorazine' was then investigated in man and was found to possess the ability to control nausea and vomiting, to relieve certain neurotic conditions and psychiatric states, and to induce an unusual type of sedation. Furthermore, experimental work has shown that the drug can alleviate certain cases of pruritus, lower body temperature, and can potentiate the effect of analgesics, anesthetics, sedatives, and muscle relaxants.

Since the possible clinical uses of 'Thorazine' are so numerous, work is being directed towards confirming, one by one, the drug's outstanding indications. And one of the first uses to be confirmed is the **dramatic control of nausea and vomiting.**

'THORAZINE'

chlorpromazine hydrochloride, S.K.F.

Presently available at your pharmacy and hospital,

for control of nausea and vomiting†:

10 mg. and 25 mg. tablets, and 50 mg. ampuls (2 cc.).

Smith, Kline & French Laboratories, Philadelphia

†Information on use of "Thorazine" in neuropsychiatry available on request.

MODERN THERAPEUTICS

Doctor's New "Formula" for Cardiac Therapy Features "3-D"

A simple new "formula" with a "3-D" approach for the treatment of heart failure has been recently devised.

Diet, digitalis and diuretics are the D's in the suggestion of Dr. Dexter S. Levy of the Department of Medicine, University of Buffalo School of Medicine. A postgraduate lecture delivered by Dr. Levy appears in the *New York State Journal of Medicine* [*54*:651, (1954)].

His "formula" is: Rest + 3D + MR − M = Compensation.

MR refers to mechanical removal of fluid, and M to mental upset.

"Manifestations of congestive failure result from an accumulation of fluid in the tissue and tissue spaces," Dr. Levy points out, "and it is merely a question of the amount of fluid that determines the variable clinical signs and resultant symptoms." The 3-D's in the program seek to prevent the accumulation and to encourage excretion, he explains.

As the fluid in the tissue is due to retention of salt and water, means have been devised to decrease either or both. Discussing diets, Dr. Levy says, "While marked fluid restriction was once an accepted form of therapy, it is now known that this may even be harmful. On the other hand, some have forced excessive amounts of fluid on the basis of diuretic action." He describes this as "untenable" and suggests that a "middle of the road philosophy" has evolved.

"The dietary approach is one of low sodium (1-4 Gm), fluids as desired, supplemental vitamin, calorie intake 1200-1800."

Daily digitalis is emphasized by Dr. Levy, with a note suggesting careful use.

"The third D refers to diuretics, which at the present time can probably be simplified to mercurials," he continues. "While other diuretic measures have been tried in the past including urea, water, ammonium chloride, caffeine and other xanthines, the present success with mercurials has relegated these others to the background."

Dr. Levy writes that "the mercurial diuretics depend on inhibiting chloride reabsorption in the tubule, and the in-

—Continued on page 90a

Diagnosis, Please!

ANSWER

(from page 25a)

DUODENAL ULCER, OBSTRUCTING

Note the small niche filled with barium near the base of the bulb, associated with marked deformity of the bulb due to scarrings from previous ulcerations. This has resulted in obstruction, with enlargement of the stomach and evidence of retained food and secretion.

overcoming weight control obstacles

Obedrin®

and the 60-10-70 basic diet

Patients can lose weight and maintain a restricted diet, in comfort, without undesirable side effects . . .

EXCESSIVE DESIRE FOR FOOD

Obedrin offers the full anorexigenic value of Methamphetamine to curb the desire for food, while counteracting mood depression. Patient co-operation is made easier.

NERVOUS TENSION

To avoid excitation and insomnia, Pentobarbital is the ideal daytime sedative. It counteracts over-stimulation by Methamphetamine, but does not diminish the anorexigenic action.

VITAMIN DEFICIENCIES

Obedrin tablets contain adequate amounts of vitamins B_1 and B_2 to supplement the 60-10-70 Basic Diet, but not enough to stimulate the appetite.

EXCESSIVE TISSUE FLUIDS

Large doses of Ascorbic Acid aid in the mobilization of fluids, so often an obstacle in obesity.

BULK NOT NECESSARY

The 60-10-70 Basic Diet provides enough roughage, so artificial bulk is unnecessary. The hazards of impaction caused by "bulk" producers is obviated.

Write For 60-10-70 Diet Pads, Weight Charts And Professional Sample Of Obedrin

S. E. MASSENGILL CO.

Bristol, Tennessee

Each tablet contains:	
Semoxydrine HCl (Methamphetamine HCl)	5 mg.
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

In the six months since ACHROMYCIN was first announced** at the Antibiotics Symposium of the Food & Drug Administration, this new broad-spectrum antibiotic has become a major weapon in modern medicine.

ACHROMYCIN has demonstrated notable effectiveness in a wide variety of clinical applications and the following characteristics are outstanding:

ACHROMYCIN is effective against pneumococci, staphylococci, beta hemolytic streptococci, gonococci, meningococci, *E. coli* infections, acute bronchitis and bronchiolitis, pertussis, and the atypical pneumonias, as well as virus-like and mixed organisms.

ACHROMYCIN has definitely fewer side-reactions.

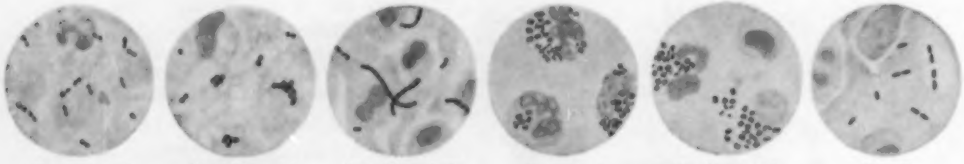
ACHROMYCIN provides more rapid diffusion in body tissues and fluids.

In solution, ACHROMYCIN maintains effective potency for a full 24-hours.

ACHROMYCIN

TETRACYCLINE HCl LEDERLE

proved effective against



Pneumococci | Staphylococci | Beta Hemolytic Streptococci | Gonococci | Meningococci | *E. coli*

NOW AVAILABLE:

CAPSULES: 50, 100, 250 mg. • PEDIATRIC DROPS: Cherry Flavored, 10 cc. vials, 100 mg. per cc., Approximately 25 mg. per 5 drops • ORAL SUSPENSION: Cherry Flavored, 1 oz. vials, 250 mg. per teaspoonful (5 cc.) • TABLETS: 50, 100, 250 mg. • SPERSOIDS*: Dispersible Powder, Chocolate Flavored, 12 and 25 dose bottles, 50 mg. per rounded teaspoonful (3 Gm.) • INTRAVENOUS: 100, 250, 500 mg.

Other dosage forms are being developed as rapidly as research permits.

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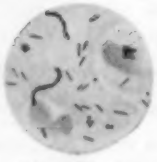
Lederle

*REG. U. S. PAT. OFF.

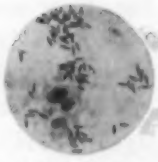
**CUNNINGHAM, T., HINES, J., LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY

MYCIN*

Bronchiolitis (Aspergillus)



Mixed Infections (Staphylococci, H. Streptococci, Proteus Vulgaris)



Acute Bronchitis (Pfeiffer's Bacillus)

—Continued from page 86a

creased output of chloride carries off sodium, base, and water." If used in conjunction with low-salt diets, frequent use of mercurials may produce the low sodium syndrome, he adds, and it is important to prevent it by avoiding too rigid sodium restriction.

The author reports "pleasing success with the use of Neohydrin to encourage diuresis. While supplemental injectable Mercuhydrin is also needed, the time element is prolonged, and the general well-being of the patient is improved."

The effectiveness of ion exchange resins is limited by difficulties encountered in administration, gastrointestinal upsets, and secondary electrolyte imbalance, according to Dr. Levy. "They would appear to be useful in some but not many patients with congestive failure and in our experience are limited to cases refractory to mercurial diuretics," he concludes.

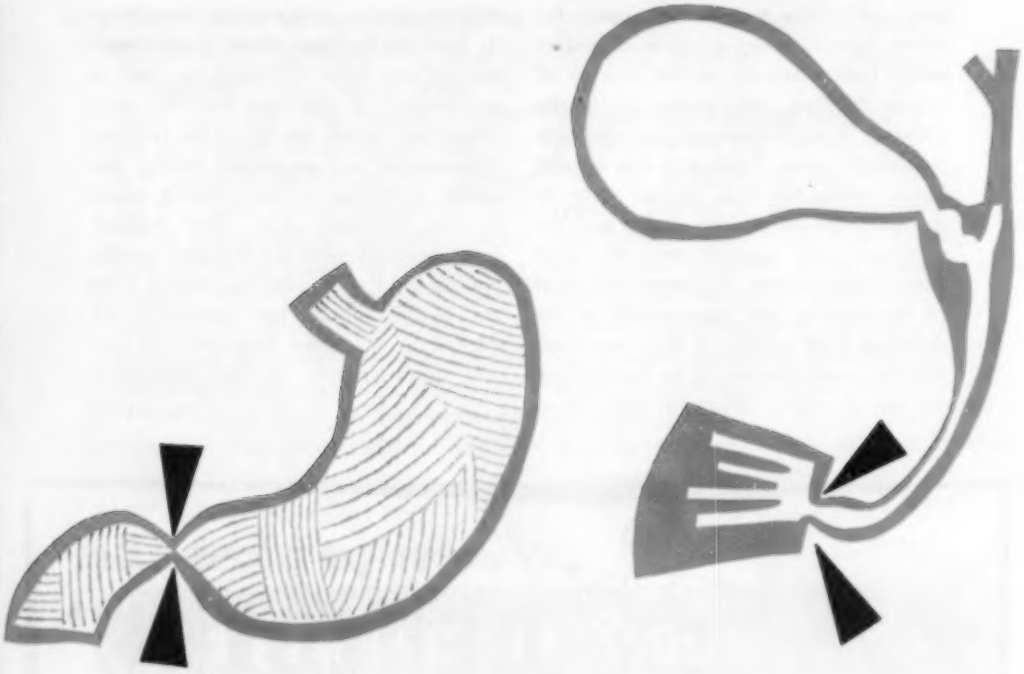
Topical Skin Therapy with an Antihistaminic Tar Ointment

A. S. Friedlaender and S. Friedlaender, *Journal of the Michigan State Medical Society*, [*53*:151, (Feb. 1954)] report the treatment of 67 cases of chronic or recurrent skin eruptions with an antihistaminic tar ointment. Of the 67 cases treated, 54 were classed as atopic dermatitis, or atopic eczema, 32 of which occurred in infants and children up to twelve years of age; the remaining cases included contact dermatitis, mummular-type eczema, sebor-

rheic dermatitis and psoriasis. The ointment employed was a combination of crude coal tar extract (5 per cent liquor carbonis detergent) and 2 per cent pyrilamine maleate (an antihistaminic agent) in an emulsified hydrophilic base. Patients, or the parents of young children, were instructed in the method of application of the ointment to affected areas. Treatment was usually begun when the skin lesions were in the subacute or chronic stage, and the ointment was applied two or three times daily, unless increased irritation of the skin or any aggravation of the eruption was noted; if this occurred, patients were instructed to discontinue its use at once. Otherwise the use of the ointment was continued for at least one week, and longer when the patient continued to show definite improvement. In most cases other ointments were used for comparison, including the hydrophilic base alone, a combination of this base and coal tar and a combination of this base and the antihistaminic; either the use of the various preparations was alternated during the course of treatment, or different areas of the involved skin were treated simultaneously with the different preparations. Of the 67 patients treated with the antihistaminic tar ointment, 44 showed an excellent response—50 per cent improvement in the dermatitis

—Continued on page 94a

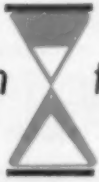
new drug action...



visceral eutonic*

DACTIL

PLAIN AND WITH PHENOBARBITAL

relieves ***pain spasm*** *usually in*  *ten minutes*

...see it work in your office

Your **DEMONSTRATION SUPPLY** will show that in 4 out of 5 patients DACTIL with Phenobarbital gives "fast action,"[1] and prolonged relief with notable "absence of side effects."[1]

Q.I.D.

for gastroduodenal and biliary spasm, cardiospasm, pylorospasm, spasm of biliary sphincter, biliary dyskinesia, gastric neurosis and irritability, and as adjunctive therapy in selected inflammatory hypermotility cases. A specific for gastrointestinal pain ⇄ spasm, DACTIL is not intended for use in peptic ulcer.

two forms

DACTIL with Phenobarbital in bottles of 50 capsules. There are 50 mg. of DACTIL and 16 mg. of phenobarbital (warning: may be habit-forming) in each capsule.

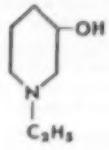
DACTIL (plain) in bottles of 50 capsules, each containing 50 mg. of DACTIL.

DACTIL is the only brand of N-ethyl-3-piperidyl diphenylacetate HCl.

1. Weinberg, B.; Ginsberg, R., and Sorter, H.: Am. J. Digest. Dis. *20*:230, 1953.

*DACTIL is eutonic—that is, it restores and maintains normal visceral tonus. It abolishes spasm while it avoids interference with normal tonus and motility. First of a newly synthesized piperidol series, DACTIL is a postganglionic parasympathetic inhibitor that interrupts spasmogenic nervous stimuli. It usually relieves pain ⇄ spasm within minutes and controls spasm within two days. DACTIL is unusually well tolerated and does not interfere with gastrointestinal or biliary secretions.

Lakeside pioneers in piperidols
Laboratories INC • MILWAUKEE 1, WISCONSIN.



MODERN THERAPEUTICS

—Continued from page 91a

with relief of itching and discomfort; and 9 showed a fair degree of improvement—25 to 50 per cent. Of the 54 patients with atopic eczema, 35 showed an excellent result. Only 3 patients (all infants) showed intolerance to the ointment, which was found to be due to the tar; the antihistaminic with the ointment base was well tolerated in these cases. As a rule the best results were obtained with the antihistaminic tar ointment, rather than with any of its components tested.

Spinal Nerve Root Pain

T. R. Love *(Rocky Mountain Medical Journal*, 50:873, Nov. 1953), reports the use of Protamide in the treatment of spinal nerve root pain in 12 cases. The usual dose was 1.3 cc. given by intramuscular injection. Protamide is a sterile colloidal solution of a proteolytic enzyme extracted from fresh hog stomach, processed and denatured. It has been used in the treatment of the lightning pains of tabes dorsalis. In the 12 cases reported, arthritis of the spine was present in 5 cases, but the onset of the spinal nerve pain was attributed to back strain; in 3 other cases back strain was known to be the cause, or was a probable cause, of the onset of pain. In one case the pain followed a severe respiratory infection. In one case the cause could not be determined,

—Continued on page 96a

—Continued from page 94a

there was no respiratory infection, but the distribution of the pain suggested the possibility of a mild spinal arthritis. In 2 cases, the nerve root pain was due to bone metastases of a malignant tumor in the spine. In the 5 cases of spinal arthritis, one to three injections of Protamide gave marked relief of pain; in some of these cases injections have been repeated if the pain became severe, but at the time of this report, none of these patients required further treatment. In the 5 other cases not due to malignant metastases, Protamide gave complete relief after two to four injections. Relief from pain has been so definite in the 2 cases of malignant metastases that these patients both request periodic injections. No undesirable side effects of the Protamide injections have been observed.

Use of Dimethylane in Occupational Stress

A carefully selected group of 30 patients with various symptoms arising from occupational stress was given Dimethylane (2,2-di-isopropyl-4-methanol-1,3-dioxolane). The drug was given orally, beginning with 250 mg. five times a day, then reduced to 3 times a day, and finally as the patient felt the need. In all of the cases a state of relaxation was produced for 2 to 3 hours after each dose. All of the pa-

—Continued on page 98a

the only

Therapeutic Formula

multivitamin tablet

this Small →

this Potent →

→Vitamin A (Synthetic)	25,000 U.S.P. units
Vitamin D (Viosterol)	1000 U.S.P. units
Thiamine Mononitrate	10 mg.
Riboflavin	5 mg.
Nicotinamide	150 mg.
→Vitamin B_{12}	6 mcg.
Ascorbic Acid	150 mg.

this Pleasing →

No Fish-Oil Taste

No Fish-Oil Burp

No Fish-Oil Allergies

...is **Optilets**

(Vitamin Therapeutic Multivitamin Tablets)

401133

Abbott

—Continued from page 96a

tients reported no loss of mental acuity and were able to perform their duties without experiencing the distressing tension symptoms previously encountered.

Boines and Horoschak reported in *Ind. Med. Surg.* [22:228(1953)] that no toxic effects were observed even though all of the patients had been on the drug for 6 to 20 months. Some of the patients experienced drowsiness on the larger initial dose but this was controlled by reducing the dose to 250 mg. three times a day.

Vitamin A in Cosmetic Creams and Lotions

The development of pure synthetic vitamin A devoid of any fishy odor has made this vitamin available for use in cosmetics. Vitamin A has long been used therapeutically by application to the skin, usually in the form of cod liver oil ointment. However, high therapeutic concentrations would probably not be desirable for continued application.

It has been shown that Vitamin A in concentrations of 1000 to 5000 U.S.P. units per Gm. is valuable in the treatment of dry flaky skin conditions not necessarily associated with a systemic deficiency of the vitamin. Although there is still considerable debate on the subject, it is probable that the vitamin applied topically is not absorbed to any great extent into the system but is simply absorbed into the skin and remains there. There has been no report of hypervitaminosis A following the topical application of vitamin A even in very large concentrations, according to Siemers and Sleezer in *Drug and Cosm. Ind.* [74:30(1954)].

The creams or lotions are prepared by dissolving the vitamin A concentrate

in the molten oil phase. Antioxidants are employed to stabilize the vitamin activity during the normal shelf life of the product.

Dangers of Polyvitamin Preparations Containing Folic Acid

Lowther cited a case in *Brit. Med. J.* [No. 4861:564 (1954)] in which a proprietary iron preparation containing folic acid was given to an improperly diagnosed patient with Addisonian anemia. There was a prompt improvement in the blood picture but an accompanying degeneration of the cord with paraplegia. The administration of vitamin B_{12} brought about a rapid response of both the hematological and neurological conditions. Folic acid had been taken in a dose of 3 mg. a day.

The author pointed out several of the dangers of including folic acid in polyvitamin preparations. Since anemia almost always accompanies subacute degeneration of the cord, an improvement in the anemia may give rise to the danger of misdiagnosis. An improvement in the general symptoms of the patient may give false reassurances which may mask the symptoms of nervous system deterioration. Finally, the author pointed out that the question of whether or not folic acid actually precipitates cord degeneration is still not certain.

Insufflation of Vitamin B_{12} in Pernicious Anemia

Vitamin B_{12} was administered by means of insufflation to 5 patients with

—Concluded on following page

—Concluded from preceding page

pernicious anemia. Perforated capsules containing 100 ug. of vitamin B_{12} with 0.135 Gm. of non-irritant powder were prepared and administered with an insufflator. Initially the doses given were more than that given intra-muscularly, but it soon became evident that the doses required were of the same order as those by intramuscular administration. The dosages employed varied from 100 ug. per day to 300 ug. per day. Maintenance dosage found to be effective was 100 ug. once or twice a week.

Israels and Shubert pointed out in *The Lancet* [266:341 (1954)] that no untoward reactions were observed. They concluded that this method of administration is a safe, effective and relatively economical method for the administration of vitamin B_{12}.

Vitamin B_{12} in the Treatment of Trigeminal Neuralgia

Massive doses of vitamin B_{12} produced considerable symptomatic relief in 14 of 18 patients with trigeminal neuralgia and in one patient with glossopharyngeal neuralgia. As a result of experience obtained with these patients Surtees and Hughes recommended a dosage regimen of 1000 ug. a day for 10 days followed by five injections of 1000 ug. twice a week. In some cases maintenance therapy may also be required. Writing in *The Lancet* [266:439 (1954)], the authors stated that when improvement took place it usually occurred quite suddenly following the second or third intramuscular injection.

Upjohn

oral
estrogen-progesterone
effective in
menstrual disturbances:

Cyclogesterin
TRADEMARK, REG. U. S. PAT. OFF.
tablets

Each scored tablet contains:

Estrogenic Substances* .. 1 mg.
(10,000 I.U.)

Progesterone .....30 mg.

**Naturally-occurring equine estrogens (consisting primarily of estrone, with small amounts of equilin and equilenin, and possible traces of estradiol) physiologically equivalent to 1 mg. of estrone.*

Available in bottles of 15 tablets.

The Upjohn Company, Kalamazoo, Michigan

NEWS AND NOTES

Alcohol, Personality Disorders Cause Pancreatic Condition

Alcoholism and personality disorders are believed to be causative factors in chronic relapsing pancreatitis, a serious inflammation of the pancreas, it was reported in a recent issue of *Archives of Internal Medicine.*

Twenty-eight cases of chronic relapsing pancreatitis observed during a three-year period were described by Dr. Arthur M. Phillips, Providence, R. I. Nineteen (68 per cent) of the patients were chronic alcoholics, and in many the onset of the attacks promptly followed the intake of alcohol, he said. Of the nine patients not classified as chronic alcoholics, four admitted to drinking in moderation. In addition, there was a high incidence of personality disorders in the group.

The patients, all men, ranged in age from 27 to 74 years, with the majority of cases (71.5 per cent) occurring in the age group of 30 to 50 years, Dr. Phillips stated. Symptoms, which varied in duration from nine hours to 22 years, included upper abdominal pains, nausea, vomiting, weight loss, and diarrhea. The frequency of attacks ranged from daily to less than one a year, with most of the patients noting three to four attacks a year.

Treatment of chronic relapsing pancreatitis, according to Dr. Phillips, can be divided into medical and surgical methods. Medical measures are concerned with the management of the acute attack, an attempt to replace any deficient pancreatic secretions, an effort to eliminate any known cause for the attacks, and drug therapy. Surgical measures are indicated for treatment of many of the complications of the inflammatory processes, he added.

Fourth National Medicinal Chemistry Symposium Announced

Recent studies of drug effects on mental disorders, latest progress in the chemical attack on hardening of the arteries, and the role of pituitary hormones in the body are three of the topics to be discussed at the Fourth National Medicinal Chemistry Symposium, to be sponsored by the American Chemical Society's Division of Medicinal Chemistry at Syracuse University, June 17 to 19.

Dr. Charles F. Kettering, Dean of American automotive engineers and inventor of the first successful electric self-starter, will present the main address at a symposium banquet on Thursday evening, June 17. Dr. Kettering has been a director and research consultant of the General Motors Corporation since he retired from active research in 1947.

Dr. Amel R. Menotti of Bristol Laboratories, Inc. is chairman of the symposium and Dr. Thomas P. Carney of Eli Lilly & Company is program chairman. Dr. Alfred Burger, University of Virginia, is chairman of the Division of Medicinal Chemistry.

Certain aspects of the digestive process will be discussed at the opening session Thursday morning. Dr. Robert R. Burtner of G. D. Searle & Company, will explain the chemistry involved in

—Continued on page 104a

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NEWS AND NOTES

—Continued from page 102a

a study of the problem and Dr. Joseph Webb of The Upjohn Company will report on the action of drugs and natural factors.

Chemical substances that attack a form of hardening of the arteries known as atherosclerosis will be described by Dr. Robert Shipley of Eli Lilly & Company at the Thursday afternoon session. The parts played in atherosclerosis by two fat-like substances in the body—cholesterol and lipoprotein—will be discussed by Dr. R. Gordon Gould of the University of California and Dr. Douglas Surgenor of the Harvard Medical School.

The class of bitter-testing compounds, such as morphine and quinine, which are known as alkaloids will be the topic of the Friday morning session, conducted by Dr. Chester Cavallito of the Irwin-Neisler Company. Dr. Cavallito will survey the importance of alkaloids in medicinal chemistry, Dr. Bernhard Witkop of the National Institute of Arthritis and Metabolic Diseases will describe modern methods for certain studies of alkaloids, and Dr. Leo Marion of the National Research Council of Canada will discuss the formation of alkaloids in living organisms.

Dr. Vincent du Vigneaud of the Cornell University Medical College, leader of the team of chemists that synthesized the pituitary hormone oxytocin last year, will report on this work and the activities of hormones produced by the posterior section of the pituitary gland at the Friday after-

—Continued on page 106a

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—Continued from page 104a

noon session. Oxytocin, an important factor in childbirth and lactation, is the first polypeptide hormone to be produced synthetically. A polypeptide is a material made up of amino acids, the building blocks of proteins. Others to speak at this session are Dr. James Sprague of Sharp & Dohme on the "Importance of New Polypeptides in Medicinal Chemistry," and Dr. Klaus Hofmann of the University of Pittsburgh School of Medicine, on "Adventures in Peptide Chemistry."

A panel discussion will be conducted Friday evening on "Mechanism of Drug Action," under the guidance of Dr. Bernard Brodie of the National Institutes of Health.

Mental health will be considered at the session on Saturday morning. Dr. Edward Evarts of the National Institute of Mental Health will speak on the effect of drugs on mental disorders and Dr. I. Arthur Mirsky of the University of Pittsburgh School of Medicine will discuss various related aspects of mental health.

March of Medicine Telecast Announced

On the second anniversary of the first "March of Medicine" telecast, TV cameras will again go to the scene of the nation's largest medical meeting, the Annual Meeting of the American Medical Association.

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NEWS AND NOTES

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From the West Coast, Smith, Kline & French Laboratories and the AMA will telecast a March of Medicine report to the nation on the 103rd Annual Meeting, in Civic Auditorium, San Francisco, Thursday night, June 24. Once again, the facilities of the National Broadcasting Company's television network, covering 76 stations for this program, will carry on-the-scene views of the nation's physicians studying medical advances.

An audience of almost 14,000,000 viewers—as with the previous programs in the Fall and Spring series of the March of Medicine—is expected to be watching at 10 p. m. Eastern Daylight Saving Time. (Local telecast date

and time can be checked with local NBC affiliates.)

The June telecast comes just two years after the first March of Medicine program from the convention floor of the Chicago meeting of the A. M. A. The Clinical Session in Denver and last June's Annual Session in New York were televised on the March of Medicine, followed by a special series starting last October, which so far has covered heart disease, cancer, the St. Louis AMA meeting, overweight, and arthritis and rheumatism. The telecasts have achieved some of the highest TV ratings obtained by documentary-type programs.

Leukemia Studies Section Announced

Establishment of a Leukemia Studies Section in the Laboratory of Biology at the Public Health Service's National Cancer Institute was announced today by Dr. John R. Heller, Institute director.

The new Leukemia Studies Section will be headed by Dr. Lloyd W. Law, a Public Health Service officer who has been studying factors affecting the development of leukemia in laboratory animals since he joined the National Cancer Institute in 1947. Among his most important contributions to this field are (1) the demonstration that the thymus, a little understood organ in the chest, plays a distinct and specific role in the induction in mice, of acute lymphocytic leukemia, the type most frequent in children; and (2) a description of the mechanism

—Continued on following page

—Continued from preceding page

and control of drug-resistance of leukemic cells in the experimental animal.

The Leukemia Studies Section will be responsible for formulating and executing the program of the National Cancer Institute in experimental leukemia. This work will include investigations directed toward improving the treatment of clinical leukemia and elucidating the etiology and pathogenesis of leukemia in experimental animals.

Dr. Heller also announced the appointment of Dr. George Hogeboom as head of the Cellular Biology Section of the Laboratory of Biology. Dr. Hogeboom has worked in the Laboratory of Biology since he joined the Public Health Service and the National Cancer Institute in 1948. He has been head of the Cell Chemistry Unit of the Cellular Biology Section since 1950.

Chemicals to Combat Lathyrism Show Promise

A University of Wisconsin pathologist said Friday that chemicals being devised by Wisconsin biochemists to combat a disease known as lathyrism may eventually be found to show promise against diseases of bone and blood vessels.

Dr. D. Murray Angevine, chairman of the Wisconsin Medical School's department of pathology, emphasized, however, that the work is still experimental.

The biochemists who are attempting to devise the chemicals are Prof. Frank

—Continued on page 114a

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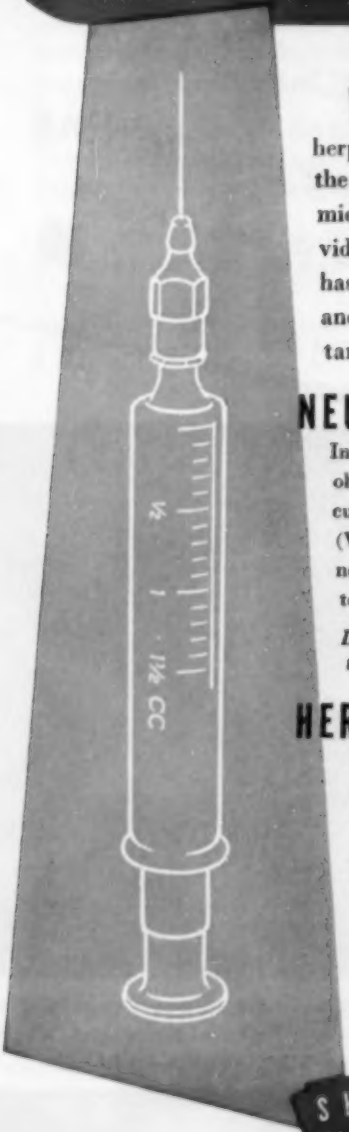

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* *A folio of reprints of these studies will be sent on request.*

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1. Slepyan, A. H. (1952) Arch. Dermat. & Syph., 65:228, February.
2. Slinger, W. N. and Hubbard, D. M. (1951) *ibid.*, 64:41, July.
3. Sauer, G. C. (1952) J. Missouri, M. A., 49:911, November.

AFTER TREATMENT—patient applied SELSUN twice a week for first two weeks, once a week for the next two weeks. Then followed a lapse in treatment. Note that scalp is still scale-free two weeks after last treatment.

NEWS AND NOTES

—Continued from page 110a

M. Strong and E. D. Schilling.

Strong and Schilling announced recently that they had identified and isolated a substance from common sweet pea seeds that causes a deforming disease known as lathyrism in human beings and domestic animals consuming the seeds for food.

Lathyrism has been known since the time of Hippocrates, but the causative agent had never been isolated until the two Wisconsin scientists turned the trick.

Human beings and livestock in India, North Africa, and much of the Mediterranean region use the common flowering sweet pea as food in emergencies and have long been subject to lathyrism.

"About a year and a half ago some of our colleagues in the Medical School—Drs. Joseph J. Lalich, Angevine, and Gerald McKay, of the department of pathology—asked us to help in the study of this disease. They felt that it has some similarities to such human diseases as arthritis and hardening of the arteries," Prof. Strong said.

The lathyrism factor makes bones soft and weak, the scientists said, probably because the toxic substance prevents proper functioning of the connective tissue in bones where calcium is laid down.

"The similarities between lathyrism and many of the diseases of man involving the connective tissue are quite evident," Dr. Angevine said, "and any chemical that might prove effective against the one might also prove effective against the other."

The Wisconsin biochemists are now attempting to devise or find what is known as an anti-metabolite or bio-

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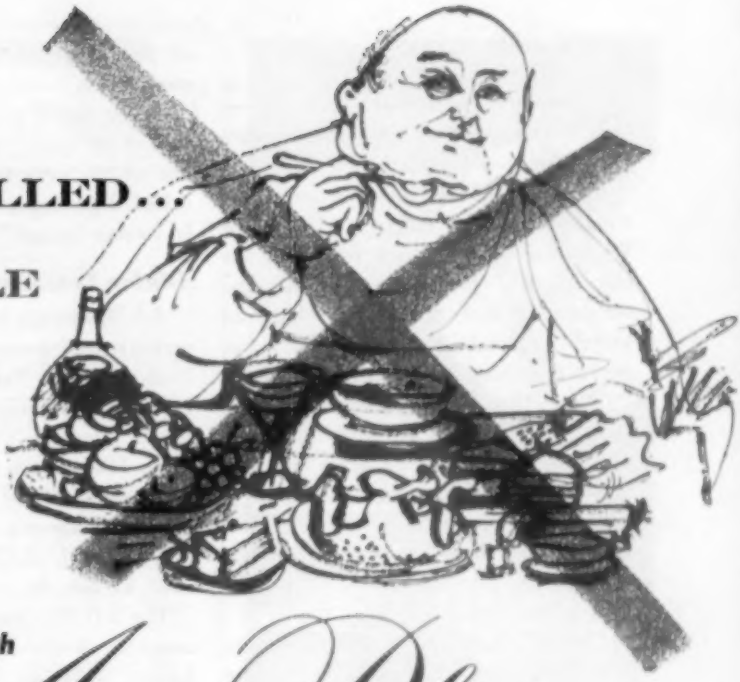

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Calcium Pantothenate	3 mg.
Calcium	242 mg.
Cobalt	0.1 mg.
Copper	1 mg.
Iodine	0.15 mg.
Iron	3.33 mg.
Manganese	0.33 mg.
Molybdenum	0.2 mg.
Magnesium	2 mg.
Phosphorus	187 mg.
Potassium	1.7 mg.
Zinc	0.4 mg.

536 Lake Shore Drive, Chicago 11, Illinois

—Concluded from page 114a

logical antagonist to the lathyrism factor which would act as an antidote.

In their effort to find an antimetabolite to the lathyrism factor the Wisconsin scientists are following the physiological principle that chemical compounds that are almost—but not quite—identical often have directly opposite physiological effects.

"Now that the causative agent of lathyrism is known, we are synthesizing a number of closely related substances which we believe may serve as antagonists to it," they said. "These will then be tested for possible protective effects in animals, and later in man if they look promising."

The scientists also said they are making a survey for possible presence of the lathyrism factor in other common foods.

"Even small amounts, taken over a period of many years, might well be one of the causative factors in the so-called degenerative diseases of old age in human beings," they pointed out.

3-D for Teaching Surgery

A 3-Dimension teaching film on rectal surgery was presented as part of the Motion Picture Teaching Seminar at the recent annual meeting of the International Academy of Proctology in Chicago. Films are a prominent feature of these meetings and are prepared by such eminent surgeons as Earl J. Halligan, M.D. of N. J. and Manuel G. Spiesman, M.D. of Illinois.

The 3-D film was prepared under the auspices of the Academy by Alfred J. Cantor, M.D., of Flushing, N. Y.

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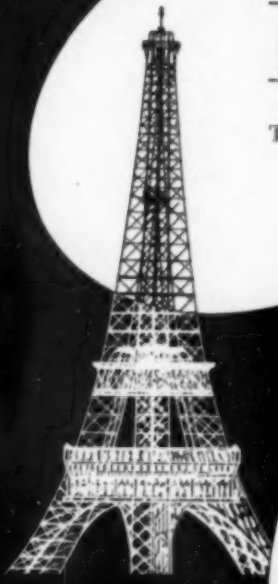

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Reference: 1. J. Pediat. 42:292 (March) 1953.